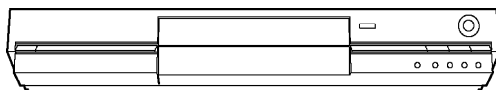


ORDER NO.DSD0405013C3

DVD Video Recorder
DMR-E85HEE / DMR-E85HGCS / DMR-E85HGN
Colour
(K).....Black Type
(S).....Silver Type



**Notes: The part of DVD Drive (VXY1814) is listed separately.
Please refer ORDER No. RAM0402001C0**

When replacing with Digital P.C.B. or HDD,
"UNFORMAT" indication is displayed and HDD must
be formatted.
After that, programme in the HDD will be lost.
In detail, please refer to each content in this service
manual.

SPECIFICATIONS

Specifications

Specifications					
Power supply	E85HEE,GC,GN AC220-240 V, 50 Hz		Antenna reception system	E85HEE	
	E85HGCS	AC220 240 V, 50 Hz / 60 Hz		OIRT(PAL-DK, SECAM-DKK1) VHF: CH R1 - CH R12 UHF: CH 21 - CH 69 CATV: CH 44MHz - 470MHz	
Power consumption	38 W			CCIR(PAL-BGH, SECAM BG) VHF: CH E2-CH E12 UHF: CH E21 - CH E69 CATV: CH S01-S05, M1-M10, U1-U10, S21-S41	
Recording system	DVD video recording format (DVD-RAM), DVD video format (DVD-R)			Hong kong (PAL-I) UHF: CH 21 - CH 69	
Optical pick-up	System with 1 lens, 2 integration units (658 nm wavelength for DVDs, 795 nm wavelength for CDs)			E85HGCS	
Recordable discs	• 12 cm 4.7 GB DVD-RAM discs • 12 cm 9.4 GB DVD-RAM discs • 8 cm 2.8 GB DVD-RAM discs • 12 cm 4.7 GB DVD-RAM discs (Ver. 2.1/3X-SPEED DVD-RAM Revision 1.0) • 8 cm 1.4 GB DVD-R discs (for General Ver. 2.0) • 12 cm 4.7 GB DVD-R discs (for General Ver. 2.0) • 12 cm 4.7 GB DVD-R discs (for General Ver. 2.0/ 4X-SPEED DVD-R Revision 1.0)			CCIR(PAL-BGH, SECAM-BG) VHF: CH E2-CH E12 UHF: CH E21 - CH E69 CATV: CH S01-S05, M1-M10, S21-S41	
	• Maximum 8 hours (using 4.7 GB disc) XP: Approx. 1 hours SP: Approx. 2 hours LP: Approx. 4 hours EP: Approx. 6 hours or 8 hours • Maximum 142 hours (with built in 80 GB HDD) XP: Approx. 17 hours SP: Approx. 34 hours LP: Approx. 68 hours EP: Approx. 106 hours or 142 hours			OIRT(PAL-DK, SECAM-DKK1) VHF: CH R1-CH R12 UHF: CH 21 - CH 69 CATV: CH 44MHz - 470MHz	
				China (PAL-D) VHF: CH 1 - CH 12 UHF: CH 13 - CH 57 CATV: CH Z1 - CH Z35	
				Hong Kong (PAL-I) UHF: CH 21 - CH 69	
Recording time				E85HGN	
				Australia (PAL-B) VHF: CH 0-CH 12 UHF: CH 28 - CH 69 CATV: CH 45MHz - 470MHz	
				New Zealand (PAL-BG) VHF: CH 1-CH 11 UHF: CH 21 - CH 69 CATV: CH 44MHz - 470MHz	
Region number	E85HEE	Region No.5	RF Converter Output	Not provided	
	E85HGCS	Region No.3			
	E85HGN	Region No.4			
Discs played	• 12 cm 4.7 GB DVD-RAM discs • 12 cm 9.4 GB DVD-RAM discs • 8 cm 2.8 GB DVD-RAM discs • 12 cm 4.7 GB DVD-RAM discs (Ver. 2.1/3X-SPEED DVD-RAM Revision 1.0) • 8 cm 1.4 GB DVD-R discs (for General Ver. 2.0) • 12 cm 4.7 GB DVD-R discs (for General Ver. 2.0) • 12 cm 4.7 GB DVD-R discs (for General Ver. 2.0/ 4X-SPEED DVD-R Revision 1.0) • DVD-VIDEO discs • DVD-Audio discs • CD-Audio discs (CD-DA) • Video CD discs • CD-R/ CD-RW discs (CD-DA, Video CD, MP3 formatted discs)		Audio system		
			Recording system	Dolby Digital 2ch, Linear PCM (XP mode, 2 ch)	
			Analog Input	AV1/AV2(21pin x 2), AV3/AV4(pin jack x 2) Standard input: 0.5 Vrms Full scale: 2.0 Vrms at 1KHz Input impedance: More than 10KΩ	
			Analog Output	AV1/AV2(21pin x 2), LINE(pin jack x 1) Standard output: 0.5 Vrms Full scale: 2.0 Vrms at 1KHz Output impedance: Less than 1.0KΩ	
			Number of channels	Recording: 2 channels Playback: 2 channels	
			Digital Output	Digital Audio Optical Output Connector (PCM,Dolby Digital,DTS,MPEG)	
			Dimensions	Approx. 430 (W) x 79 (H) x 274 (D) mm [Approx. 16 15/16" (W) x 3 1/8" (H) x 10 13/16" (D)] (excluding protrusions)	
Built-in HDD Capacity	80 GB		Mass	Approx. 4.4 kg (9.70 lbs)	
Drive Unit	High Speed Drive (correspond to 4 times speed with DVD-R disc and 3 times speed with DVD-RAM disc)		Operating temperature	5°C - 40°C (41°F - 104°F)	
Video system			Operating humidity range	10 %-80 % RH (no condensation)	
TV system	E85HEE	SECAM(Only Input)/PAL system, 625 lines, 50 fields /NTSC system, 525 lines, 60 fields	Clock unit	Quartz-controlled 12-hour digital display	
	E85HEGCS,GN	PAL system, 625 lines, 50 fields /NTSC system, 525 lines, 60 fields	LASER Specification (Class I LASER Product)		
Recording system	MPEG2 (Hybrid VBR)		Wave length	795 nm, 658 nm	
Video Input (※): E85HEE Only	Video In: (SECAM(※)/PAL/NTSC)	AV1/AV2(21pin x 2), AV3/AV4(pin jack x 2) 1.0Vp-p ; 75Ω	Laser power	No hazardous radiation is emitted with the safety protection.	
	S Video In: (SECAM(※)/PAL/NTSC)	AV2(21pin), AV3/AV4(S connector x 2) Y:1.0Vp-p ; 75Ω, C:0.3Vp-p ; 75Ω	Power consumption in standby mode	approx. 3.0 W	
	RGB In(PAL):	AV2(21pin) 0.7Vp-p ; 75Ω	Solder	These model use lead free solder (PbF).	
Video Output	Video Out: (PAL/NTSC)	AV1/AV2(21pin x 2), LINE(pin jack x 1) 1.0Vp-p ; 75Ω			
	S-Video Out: (PAL/NTSC)	AV1(21pin), S connector x 1 Y:1.0Vp-p ; 75Ω, C:0.3Vp-p ; 75Ω			
	RGB Out: (PAL)	AV1(21pin), 0.7Vp-p ; 75Ω			
	Component video out: (NTSC 480P/480i) (PAL 576P/576i)	Y: 1.0Vp-p ; 75Ω(pin jack) PB: 0.7Vp-p ; 75Ω(pin jack) PR: 0.7Vp-p ; 75Ω(pin jack)			

Notes : Mass and dimensions are approximate.
Specifications are subject to change without notice.

© 2004 Matsushita Electric Industrial CO., Ltd. All rights reserved.
Unauthorized copying and distribution is a violation of law.



1. Safety precautions

1.1. General guidelines

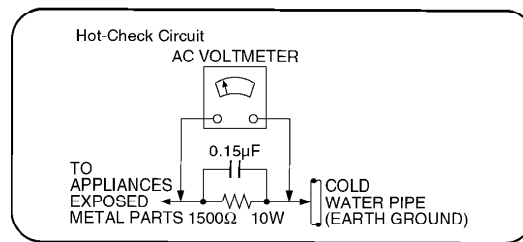
- 1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.**
- 2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.**
- 3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.**

1.1.1. Leakage current cold check

- 1. Unplug the AC cord and connect a jumper between the two prongs on the plug.**
- 2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1M Ω and 5.2M Ω . / When the exposed metal does not have a return path to the chassis, the**

reading must be ∞ .

Figure 1



1.1.2. Leakage current hot check / (See [Figure 1](#) .)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5k Ω , 10 watts resistor, in parallel with a 0.15 μ F capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in [Figure 1](#) .
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliampere. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

2. Prevention of Electrostatic Discharge (ESD) to Electrostatic Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatic Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistor-sand semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electrostatic discharge (ESD).

1. Immediately before handling any semiconductor component or

semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.

2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static (ESD protected)" can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

Caution

Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device).

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by Δ in the schematic diagrams, Exploded Views and replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

3. Precaution of Laser Diode

CAUTION:

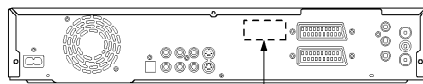
This product utilizes a laser diode with the unit turned "on", invisible laser radiation is emitted from the pickup lens.

Wave length: 795 nm/658 nm

Maximum output radiation power from pickup: 100 μ W/VDE

Laser radiation from the pickup lens is safety level, but be sure the followings:

1. Do not disassemble the optical pickup unit, since radiation from exposed laser diode is dangerous.
2. Do not adjust the variable resistor on the pickup unit. It was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pickup lens for a long time.



LUOKAN 1 LASERLAITE
KLASS 1 LASER APPARAT

CLASS 1
LASER PRODUCT

ACHTUNG:

Dieses Produkt enthält eine Lasereinheit.

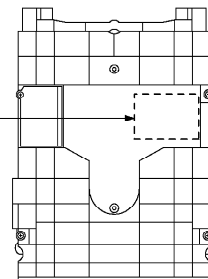
Im eingeschalteten Zustand wird unsichtbare Laserstrahlung von der Lasereinheit abgestrahlt.

Wellenlänge: 795 nm/658 nm

Maximale Strahlungsleistung der Lasereinheit: 100 μ W/VDE

Die Strahlung der Lasereinheit ungefährlich, wenn folgende Punkte beachtet werden:

1. Die Lasereinheit nicht zerlegen, da die Strahlung an der freigelegten Laserdiode gefährlich ist.
2. Den werkseitig justierten Einstellregler der Lasereinheit nicht verstellen.
3. Nicht mit optischen Instrumenten in die Fokussierlines blicken.
4. Nicht über längere Zeit in die Fokussierlines blicken.



DANGER - VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM. (FDA 21 CFR 101.10.1)

CAUTION - VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM. (IEC 60825-1)

ATTENTION - RAYONNEMENT LASER VISIBLE ET INVISIBLE EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE. AÉVIGNEZ-VOUS.

ADVARSEL - SYNLIG OG ØSTYRLIG LASERSTRÅLING NÅR ÅBENING. UNDGÅ UDSETELSE FOR STRÅLING.

VARNING - SÄRLIG OCH ØSTYRLIG LASERSTRÅLING NÄR DENNA DEL ÅPENS. UNDGÅ OCH ÖPPNINGSSTRÅLINGEN.

AVMÄRSEL - SYNLIG OG ØSTYRLIG LASERSTRÅLING NÄR DEKSEL ÅPNET. UNDGÅ ØKSEPPNINGEN FOR STRÅLING.

VORSICHT - SICHTBARE UND UNSICHTBARE LASERSTRÄHLUNG. WENN ABDECKUNG GEÖFFNET NICHT DEM STRAHL AUSSETZEN.

注意 - 打开时有可见及不可见之雷射光发出。避免激光直射。

注意 - 打开时有可见及不可见之雷射光发出。避免激光直射。

ROHS2013

CAUTION!

THIS PRODUCT UTILIZES A LASER.

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

4. Handling the Lead-free Solder

4.1. About lead free solder (PbF)

Distinction of PbF P.C.B.:

P.C.B.s (manufactured) using lead free solder will have a PbF stamp on the P.C.B.

Caution:

- Pb free solder has a higher melting point than standard solder; Typically the melting point is 50 - 70°F (30 - 40°C) higher. Please use a high temperature soldering iron. In case of the soldering iron with temperature control, please set it to 700 ± 20°F (370 ± 10°C).
- Pb free solder will tend to splash when heated too high (about 1100°F/600°C).
- When soldering or unsoldering, please completely remove all of the solder on the pins or solder area, and be sure to heat the

soldering points with the Pb free solder until it melts enough.

5. Each Buttons

6. Taking out the Disc from RAM-Drive Unit when the Disc cannot be ejected by OPEN/CLOSE button

6.1. Forcible Disc Eject

6.1.1. When the power can be turned off.

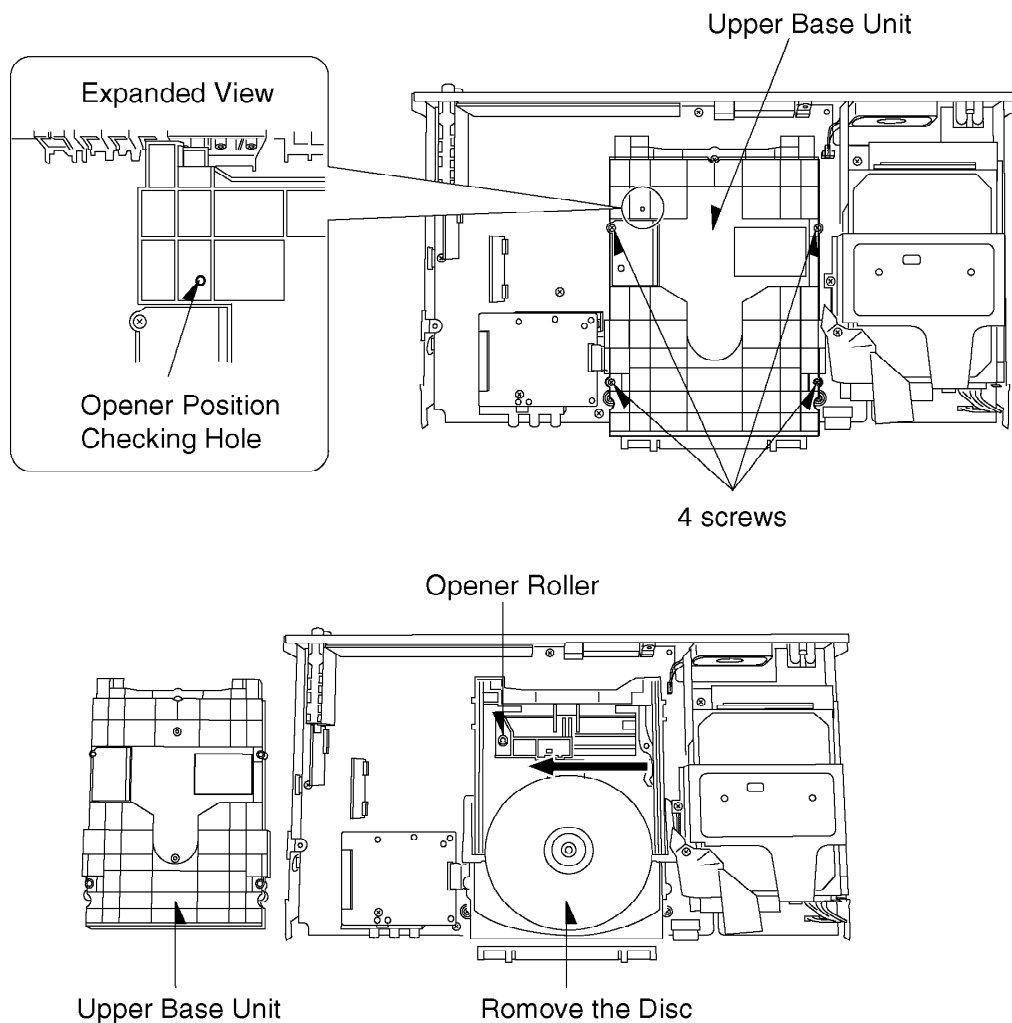
1. Turn off the power and press [STOP] [CH UP] keys on the front panel simultaneously for 5 seconds.

6.1.2. When the power can not be turned off.

1. Press [POWER] key on the front panel for over 10 seconds to turn off the power forcibly, and press [STOP] [CH UP] keys on the front panel simultaneously for 5 seconds.

6.2. When the Forcible Disc Eject can not be done.

1. Turn off the power and pull out AC cord.
2. Remove the Top Case.
3. Remove the Front Panel.
4. Remove 4 screws and Upper Base Unit from DVD-RAM Drive.
5. Take out the disc and put the Opener Roller on fully position for direction of Arrow.
6. Put the Upper Base Unit so that the Opener Roller is inserted into the groove.
7. Check center of Opener Roller is seen through the Opener position Checking Hole, and tighten 4 screws.



7. Service Explorer

Confirm “RAM-Drive Last Error” in Service Mode

Execute Service Mode

1. Press [STOP], [TIME SLIP] and [OPEN/CLOSE] simultaneously for 5 seconds when P-off.

FL Display:

SERVICE MODE

***After finishing display “(7). Factor of Drive Error occurring”, press [0] [2] ~[9] [9] keys of the Remote Controller so that 99 memories can be displayed as maximum.**

2. Press [4] [2] keys of remote controller.

Example of FL Display:

(1) Error Number is displayed for 5 seconds.

NO 01

(2) Time when the error has occurred is displayed for 5 seconds.

40216191526

The error has occurred at 2004(year)/Feb.(month)/19(day)/19(hour):15(minute):26(second)

(3) Last Drive Error (1/2) is displayed for 5 seconds.

031000

Error Sense
Key

00: Bad disc
03: Bad disc
04: Bad disc or RAM-Drive malfunction

When above error codes are displayed, confirm operation with Panasonic RAM disc or Panasonic DVD-R disc.
*If the operation is OK, judge the error is due to media.
*If the operation is NG and symptom as BLOCK NOISES and so on that are particular symptom of Digital appears, judge the error is due to RAM-Drive or Digital PCB.

(4) Last Drive Error (2/2) is displayed for 5 seconds.

00 13 00 00

*This error code is unnecessary for service.

(5) Error occurring Disc type is displayed for 5 seconds.

MEDIA/DVDR

Disc type

*The error disc cannot be specified, display as "DVD".

(6) Disc Maker's ID is displayed for 5 seconds.

MXL R 061

Example of Disc Maker's ID:
DVD-R Disc

No.	FL Display (Disc Maker's ID)	Disc Maker	Country
1	MEI	Panasonic	Japan
2	PVC	Pioneer	Japan
3	MCC	Mitsubishi Chemical Corporation	Japan
4	TDK	TDK	Japan
5	MXL	Maxell	Japan
6	MCI	MITUI CHEMICALS	Japan
7	JVC	Victor JVC	Japan
8	TAIYOYUDEN	Taiyo yuden	Japan
	TYG		
9	GSC	Giga Storage	Taiwan
10	PRODISC	Prodisc	Taiwan
11	PRINCO	PRINCO	Taiwan
12	RITEK	RITEK	Taiwan
13	OPTDISC	OPTDISC	Taiwan
14	LEAD DATA	LEAD DATA	Taiwan
15	CMC	CMC	Taiwan
16	AUVISTAR	AUVISTAR	Taiwan

No.	FL Display (Disc Maker's ID)	Disc Maker	Country
17	ACER	Acer	Taiwan
18	VIVASTAR	VIVASTAR	Switzerland
19	LGE	LG Electronics	Korea

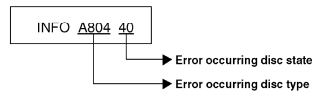
DVD-RAM Disc

No.	FL Display (Disc Maker's ID)	Disc Maker	Country
1	MEI	Panasonic	
2	MATSUSHITA	Panasonic	Japan
3	MXL	Maxell	Japan
4	PRODISC	Prodisc	Taiwan
5	OPTDISC	OPTDISC	Taiwan
6	CMC	CMC	Taiwan

*Since an display is arbitrarily set up by the disk producer side, the above-mentioned display may be changed.

Please make it reference as an example of a display.

(7) Factor of Drive Error occurring is left displayed



Error Occurring Disc Type

FL Display	Disc Type
00	DVD-ROM/Video
01	Audio-CD
02	2.6GB DVD-RAM
03	4.7GB DVD-RAM
04	DVD-R

Error Occurring Disc State

FL Displays (Hexadecimal)	Description			
	Disc distinction state	Cartridge disc state	Cartridge disc state	Disc size
00	OK	With cartridge	Has not been opened yet.	12 cm
10	OK	With cartridge	Has not been opened yet.	8 cm
20	OK	With cartridge	Has been opened.	12 cm
30	OK	With cartridge	Has been opened.	8 cm
40	OK	Bare	Has not been opened yet.	12 cm
50	OK	Bare	Has not been opened yet.	8 cm
60	OK	Bare	Has been opened.	12 cm
70	OK	Bare	Has been opened.	8 cm
80	NG	With cartridge	Has not been opened yet.	12 cm
90	NG	With cartridge	Has not been opened yet.	8 cm
A0	NG	With cartridge	Has been opened.	12 cm
B0	NG	With cartridge	Has been opened.	8 cm
C0	NG	Bare	Has not been opened yet.	12 cm
D0	NG	Bare	Has not been opened yet.	8 cm
E0	NG	Bare	Has been opened.	12 cm
F0	NG	Bare	Has been opened.	8 cm

8. Self-Diagnosis and Special Mode Setting

8.1. Self-Diagnosis Functions

Self-Diagnosis Function provides information for errors to service personnel by “Self-Diagnosis Display” when any error has occurred.

U14, H** and F** are stored in memory and held.

Display on FL will be cancelled when the power is turned off or AC input is turned off during self-diagnosis display is ON.

Error Code	Diagnosis contents	Description	Monitor Display	FL display
U12	Remote control code error	Display appears when main unit and remote controller codes are not matched.	No display	<div>REMOTE I</div> <p>“*” is remote c code of the ma Display for 5 s</p>
U14	Abnormal inner temperature detected	Display appears when the drive temperature exceeds 70°C. The power is turned off forcibly. For 30 minutes after this, all key entries are disabled. (Fan motor operates at the highest speed for the first 5 minutes. For the remaining 25 minutes, fan motor is also stopped.) The event is saved in memory as well.	No display	<div>U14</div> <p>“U14” is displa minutes.</p>
U99	Hang-up	Displayed when communication error has occurred between Main microprocessor and Timer microprocessor.	No display	<div>U99</div> <p>Displayed is le [POWER] key i</p>
H01	Inoperative fan motor	Display appears when inoperative fan motor is detected after powered on. The power is turned off when detecting.	No display	<div>H01</div> <p>Displayed is le</p>


Error Code	Diagnosis contents	Description	Monitor Display	FL display
F00	No error information	Initial setting for error code in memory (Error code Initialization is possible with error code initialization and main unit initialization.)	No display	<div>F00</div> <div>Displayed is le</div>
F01	Drive hardware error	Display appears when drive unit error is detected. The event is saved in memory.	No display	<div>F01</div> <div>Displayed is le</div>
F12	Initialization error when main microprocessor is started up for program recording	Display appears when initialization error is detected after starting up main microprocessor for program recording. The event is saved in memory. The power is turned off when detecting.	No display	<div>F12</div> <div>Displayed is le</div>
UNSUPPORTED	Unsupported disc error	*An unsupported format disc was played, although the drive starts normally. *The data format is not supported, although the media type is supported. *Exceptionally incase of the disc is dirty.	"This disc is incompatible."	<div>UNSUPPORTED</div> <div>Display for 5 s</div>
NO READ	Disc read error	*A disc is flawed or dirty. *A poor quality failed to start. *The track information could not be read.	"Cannot read. Please check the disc."	<div>NOREAD</div>
HARD ERR	Drive error	The drive detected a hard error.	"DVD drive error."	<div>Display for 5 s</div> <div>HARD ERR</div>
SELF CHECK	Restoration operation	Since the power cord fell out during a power failure or operation, it is under restoration operation. *It will OK, if a display disappears automatically. If a display does not disappear, there is the possibility that defective Digital P.C.B. / RAM drive.	No display	<div>SELF CHECK</div>

Error Code	Diagnosis contents	Description	Monitor Display	FL display
Full Program	32 programs are already set.	32 programs are already set.	No display	PROG FULL
HDD SLEEP	In order to extend HDD life, the HDD is in SLEEP (not activated) mode.	<p>If there is no disc in the unit, the HDD will go into SLEEP mode after there has been no operation for 30 minutes or longer.</p> <p>*While in SLEEP mode play or recording may not begin rightaway because the HDD takes time to be re-activated.</p>	"HDD SLEEP" is displayed for 3 seconds.	HDD S

8.2. Special Modes Setting

Item		FL display	Key oper:
Mode name	Description		Front K
TEST Mode	*All the main unit's parameters (include tuner) are initialized.	TEST AV1	Press [SKIP (RE SLIP)] and [OPEN/CLOSE] keys simultaneously for five seconds while power is off.
Service Mode	Setting every kind of modes for servicing. *Details are described in "8. 3. Service Mode".	SERVICE MODE	When the power is on, press [STOP], [SKIP (REV)] and [OPEN/CLOSE] keys simultaneously for five seconds.
Rating password	The audiovisual level setting password is initialized to "Level 8".	INIT	Open the tray, and press [SKIP (REV)] and [SKIP (FWD)] simultaneously for five seconds.
Forced disc eject	<p>Removing a disc that cannot be ejected.</p> <p>The tray will open and unit will shift to P-off mode.</p> <p>*When Timer REC is ON or EXT-LINK is ON, execute " Forced disc eject " after releasing TimerREC or EXT-LINK.</p> <p>*This command is not effective during "Child lock" is ON.</p>	<p>The display before execution leaves.</p> <p>*****</p>	When the power is on, press [STOP] and [SKIP (REV)] keys simultaneously for five seconds.

Item		FL display	Key oper:
Mode name	Description		Front K
Child lock/unlock	Set or release "Child Lock".	X HOLD	Press [ENTER] ; [RETURN] by re controller simul until [X-HOLD] i displayed.
NTSC/PAL system select	To switch PAL/ NTSC alternately.	The display before execution leaves. *****	When the power E mode), press and [OPEN/CLO simultaneously seconds.
Forced power-off	When the power button is not effective while power is ON, turn off the power forcibly.*When Timer REC is ON or EXT-LINK is ON, execute "Forced Power-off" after releasing Timer REC or EXT- LINK. Action: The tray will open, and the power will turn off.	Display in P-off mode.	Press [Power] k than 10 seconds
Aging	Perform sequence of modes as * Aging Description shown below continually.	Display following the then mode.	When the power press [CH DOW SLIP] and [OPE CLOSE] simulta for over five sec less than 10 sec *The [REC MOD be set to EP or I *When the unit h up because of p keys for over 10 once turn off th and re-execute 1 command. "When releasing mode, press [P key.

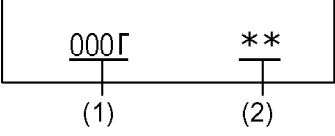
Item		FL display	Key oper:
Mode name	Description		(Remote contr
Release Items	Item of Service Mode executing is cancelled.	SERVICE MODE	Press [0] [0] or service mode.
Error Code Display	Last Error Code of U14/H/F held by Timer is displayed on FL. *Details are described in “8. 1. Self-Diagnosis Functions”.	<div>♣ □ □</div> <div>*♣ shows U/H/F. □ □ shows number.</div>	Press [0] [1] in s mode
ROM Version Display	Region code, MAIN firm version, TIMER firm version and DRIVE firmware versions are displayed on FL for five seconds per each version in order, but ROM version will be left displayed.	<div>REGION*</div> <div>MAIN *****</div> <div>TIMER*****</div> <div>DRIVE ****</div> <div>ROM * ***</div> <div>  “ ”are version displays. </div>	Press [0] [2] in s mode

Item		FL display	Key oper:
Mode name	Description		(Remote contr
<div><div>Version Display of Main Microprocessor</div><div><div>Example of FL Display</div><div><div>0100SK</div><div><div>Version</div><div><div>OEM Code</div><div>0: Matsushita Electric 1: Hitachi 2: Samsung 3: DENON</div></div></div><div><div>Destination Code and Model Code</div><div><div>For Japan</div><div>SK: DMR-E55 SL: DMR-E85H SR: DMR-E95H SS: DMR-E300H SU: DMR-E500H SQ: DMR-E75V SV: DMR-E150V</div><div><div>For North America/Canada/Latin America</div><div>DK: DMR-E55P/PC/PL/F DP: DMR-E65P DL: DMR-E85HP/HPC DR: DMR-E95HP DU: DMR-E500HP/HPC DQ DMR-E75VP/VPC/VI</div><div><div>For Europe/Asia/</div><div>EK: DMR-E55EG/EB/EBL/EP/EE/GCS/GN/GK/GC, DMR-E53E EP: DMR-E65EG/EB/EP/EE/GCS/GN/GK/GC EL: DMR-E85HEG/HEB/HEP/HEE/HGCS/HGN ER: DMR-E95HEG/HEB EU: DMR-E500HEG/HEB/HGCS/HGN/HGK EQ: DMR-E75VEG/VEB</div></div></div></div></div></div></div></div>			
<div><div>Version Display of Timer Microprocessor</div><div><div>Example of FL Display</div><div><div>0010DA</div><div><div>Version: 0.01</div><div>Bottom 2 figures of Part Number of Timer Microprocessor: M30</div></div></div></div></div>			
White Picture Output	White picture is output as component Output from AV Decoder. *White picture (Saturation rate : 100%) *It is enable to switch Interlace/Progressive by "I/Pswitch: [1] [4]"	<div>*Initial mode is "Interlace". <div>WHIT I</div></div> <div>Switch Interlace/Progressive <div>WHIT P</div></div>	<div>Press [1] [1] in s mode.</div> <div>Press [1] [4] in V Picture Output r *I/P are switched alternately.</div>

Item		FL display	Key oper:
Mode name	Description		(Remote contr
Magenta Picture Output	Magenta picture is output with Component Output from AV Decoder. *Magenta picture (Saturation rate: 100%) *It is enable to switch Interlace/Progressive by "I/Pswitch: [1] [4]"	*Initial mode is "Interlace". <div>MAGE I</div>	Press [1] [2] in s mode.
		Switch Interlace/Progressive <div>MAGE P</div>	Press [1] [4] in M Picture Output r *I/P are switched alternately.
RTSC Return in XP (A & V)	AV1 input signal is encoded (XP), decoded (XP) and output decoded signal to external without DISC recording and DISC playback.	Initial mode: EE2/ Interlace / XP/ Audio 48kHz <div>EE2 I XP 48</div>	Press [1] [3] in s mode.
		Switch Interlace/Progressive <div>EE2 P XP 48</div>	Press [1] [4] in F Return XP mode *I/P are switched alternately.
		Audio 44.1 kHz/ 48 kHz Switch <div>EE2 P XP 44</div>	Press [2] [4] in F Return XP mode *48 kHz / 44.1 kHz switched alternately.
I/P Switch	Switch Interlace and Progressive in EE mode. *Initial setting is "Interlace". *This command is effective during executing "White Picture Output", "MagentaPicture Output" and "RTSC Return in XP (A & V)" modes.	Initial mode is Interlace <div>SERVICE I</div>	Press [1] [4] in I mode. *I/P are switched alternately.
		Switch Interlace/Progressive <div>SERVICE P</div>	
Audio Mute (XTMUTE)	Check whether mute is applied normally by the timer microprocessor.	<div>TIMER MUTE</div>	Press [2] [1] in s mode.
Audio Mute (XDMUTE)	Check whether mute is applied normally by the Digital P.C.B. (GLUE IC).	<div>MAIN MUTE</div>	Press [2] [2] in s mode.

Item		FL display	Key oper:
Mode name	Description		(Remote contr
Audio Pattern Output	The audio pattern stored in the internal memory is output (Lch: 1kHz/-18dB) (Rch: 400Hz/-18dB) *Audio sound clock switching operation of DAC can beconfirmed by sub command [2] [4].	Initial mode (Audio 48kHz) <div>AUDIO 48</div>	Press [2] [3] in s mode.
		Audio 44.1kHz/48kHz switching <div>AUDIO 44</div>	Press [2] [4] in / Pattern Output i *48 kHz / 44.1 kHz switched altern:
HDD READ inspection	Perform a complete read inspection of the HDD.	When the HDD is OK <div>HDD RDOK</div> If the HDD is defective <div>HDD RDNG□○○</div> □ : Judge of Forward rate. *When normal (Forward rate is 35Mbps or more, and there is no HDD error): □ is Space. *When Abnormal (Forward rate is less than 35Mbps): □ is X. ○○ : Number of what have spent time for seeking over 100ms. *When normal: ○○ are spaces. *When Abnormal: Display Number of what have spent time for seeking over 100ms. However, if the number is more than 100, Display [XX]. We judge it is normal that the number is less than 4.	Press [3] [1] in t mode. *When canceling checking mode executing, do "f power-off". Method: Press the "POW button on the Fr more than 10 se
Laser Used Time Indiction	Check laser used time (hours) of drive.	<div>LASER*****</div> ● (*****) is the used time display in hour. ● Laser used time ofDVD/ CD in Playback/ Recording mode is counted.	Press [4] [1] in s mode.
Delete the Laser Used Time	Laser used time stored in the memory of the unit is deleted.	<div>CLR LASER</div>	Press [9] [5] in s mode.

Item		FL display	Key oper:
Mode name	Description		(Remote contr
RAM Drive Last Error	<p>RAM Drive error code display.</p> <p>*For details about the drive error code, refer to the Service Manual for the specific RAM Drive.</p> <p>*Details are described in “7. Service Explorer ”.</p>	<p>1. Error Number is displayed for 5 seconds.</p> <div>NO **</div> <p>2. Time when the error has occurred is displayed for 5 seconds.</p> <div>YMMDDhhmmss</div> <p>Y: Year MM: Month DD: Day hh: Hour mm: Minute ss: Second</p> <p>3. Last Drive Error (1/2) is displayed for 5 seconds.</p> <div>*****</div> <p>4. Last Drive Error (2/2) is displayed for 5 seconds.</p> <div>*****</div> <p>5. Error occurring Disc type is displayed for 5 seconds.</p> <div>MEDIA*****</div> <p>6. Disc Maker ID is displayed for 5 seconds.</p> <div>*****</div> <p>7. Factor of Drive Error occurring is left displayed</p>	<p>Press [4] [2] in s mode.</p> <p>Then press [0] [the past 99 erro displayed.</p> <p>Incase that the s cannot be identi display is black</p>

		INFO*****	
Item		FL display	Key oper: (Remote contr
Mode name	Description		
Delete the Last Drive Error	Delete the Last Drive Error information stored on the DVD RAM-Drive.	CLR DRIVE	Press [9] [6] in s mode.
Turn on all FL/LEDs	All segments of FL and all LEDs are turned on.	All segments are turned on.	Press [5] [1] in s mode.
PB HIGH Signal Output	8 pin of AV 1 Jack (PB HIGH terminal) is High (approx. 11V DC).	PB8 HIGH	Press [5] [2] in s mode.
PB MIDDLE Signal Output	8 pin of AV 1 Jack (PB HIGH terminal) is Middle (approx. 5.5V DC).	PB8 MIDDLE	Press [5] [3] in s mode.
Front connection inspection	Press all front keys and check the connection between Main P.C.B. and Front P.C.B.	 <p>(1) Each time a key is pressed, segment turned on increases one by one. (2) Total umber of keys that have been pressed.</p>	Press [5] [4] in s mode.
Production Date Display	Display the date when the unit was produced.	PD YYYYMMDD YYY: Year MM: Month DD: Day	Press [6] [1] in s mode.
Display the accumulated working time	Display the accumulated unit's working time.	***** (Indicating unit: Second)	Press [6] [4] in s mode.

Item		FL display	Key oper:
Mode name	Description		(Remote contr
Display the Error History	Display the Error History stored on the unit.	<p>Display reason of error for 5 seconds.</p> <div>FTREC***</div> <p>Display the time when the error has occurred for 5 seconds..</p> <div>YYMMDDHHMM</div> <p>YY: Year MM: Month DD: Day HH: Hour MM: Minute</p> <p>Display the accumulated working time to occurring of the error for 5 seconds..</p> <div>*****</div> <p>(Indicating unit: Second)</p>	<p>Press [6] [5] in s mode.</p> <p>Then press [0] [the past 19 erro are displayed.</p>
Delete the Error History	Delete Error History information stored on the unit.	<div>CLR FTREC</div>	Press [9] [7] in s mode.
AV4(V)/AV1(RGB) I/O Setting	Set input to AV4(V) and set output to AV1(RGB) for I/O checking	<div>AV4V-AV1RGB</div>	Press [8] [0] in s mode.
AV2(Y/C)/AV1(V) I/O Setting	Set input to AV2(Y/C) and set output to AV1(V) for I/O checking	<div>AV2YC-AV1V</div>	Press [8] [1] in s mode.
AV2(V)/AV1(Y/C) I/O Setting	Set input to AV2(V) and set output to AV1(Y/C) for I/O checking	<div>AV2V-AV1 YC</div>	Press [8] [2] in s mode.
AV2(RGB)/AV1(V) I/O Setting	Set input to AV2(RGB) and set output to AV1(V) for I/O checking	<div>AV2RGB-AV1V</div>	Press [8] [3] in s mode.

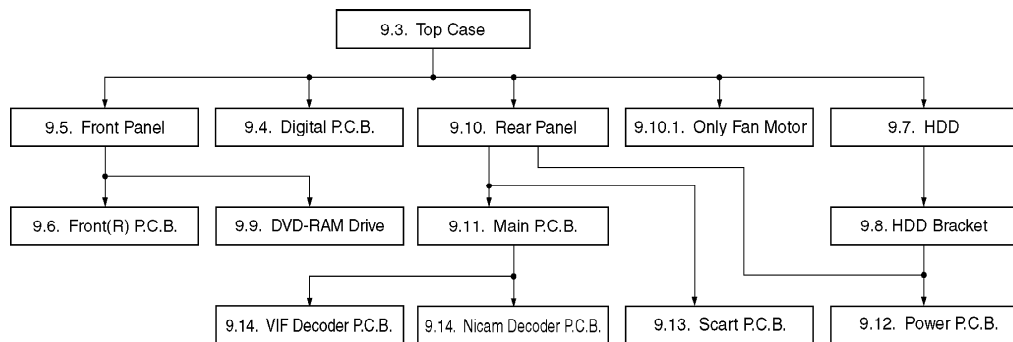
Item		FL display	Key oper:
Mode name	Description		(Remote contr
P50 (H) Output	Timer Microprocessor IC7501-22 output High signal for AV1-pin 10 passing through inverter (approx. 0V DC at AV1-pin 10).	<div>P50 HIGHOUT</div> <div>When OK.</div> <div>P50 HIGH OK</div> <div>When NG.</div> <div>P50 HIGH NG</div>	Press [8] [4] in s mode.
P50 (L) Output	Timer Microprocessor IC7501-22 output Low signal for AV1-pin 10 passing through inverter (approx. 4.4 V DC at AV1-pin 10).	<div>P50 LOW OUT</div> <div>When OK.</div> <div>P50 LOW OK</div> <div>When NG.</div> <div>P50 LOW NG</div>	Press [8] [5] in s mode.
Tray OPEN/ CLOSE Test	The RAM drive tray is opened and closed repeatedly.	<div>NO*****</div> <div>“*” is number of open/ close cycle times.</div>	Press [9] [1] in s mode *When releasing mode, press the button on Front more than 10 se
Error code initialization	Initialization of the last error code held by timer (Write in F00)	CLR E-CODE	Press [9] [8] in s mode.
Initialize Service	Last Drive Error, Error history and Error Codes stored on the unit are initialized to factory setting.	CLR SERV	Press [9] [9] in s mode.
Finishing service mode	Release Service Mode.	<div>Display in STOP (E-E) mode.</div> <div>*****</div>	Press power bu the front panel i mode.

9. Assembling and Disassembling

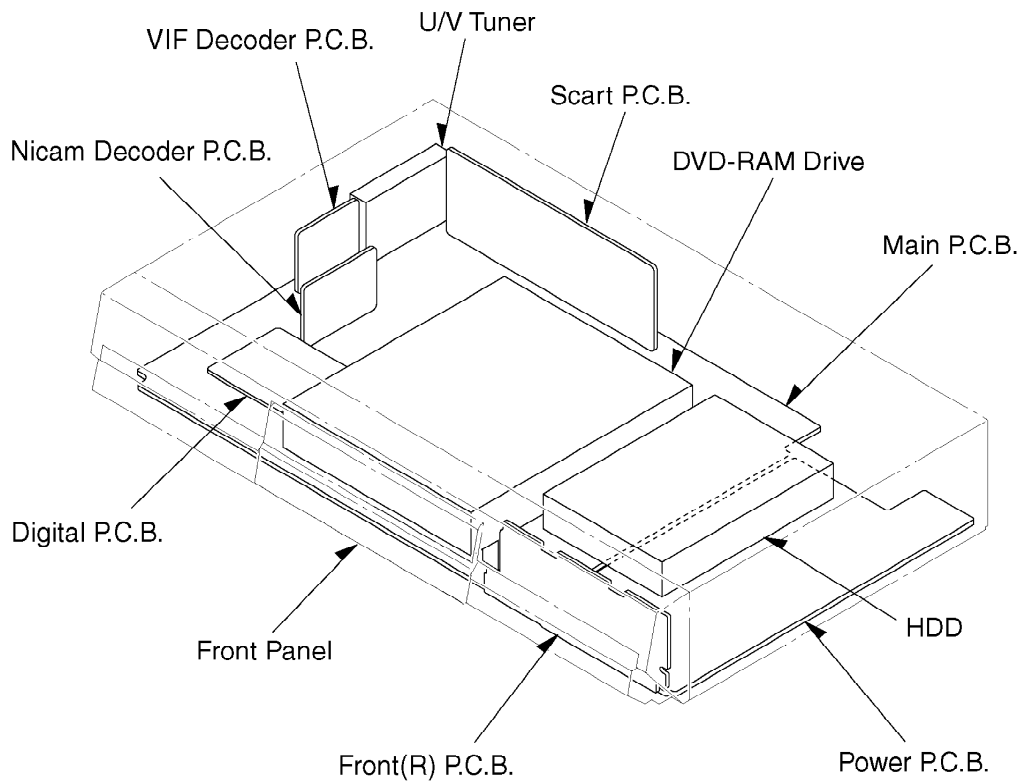
9.1. Disassembly Flow Chart

The following chart is the procedure for disassembling the casing and inside parts for internal inspection when carrying out the servicing.

To assemble the unit, reverse the steps shown in the chart below.

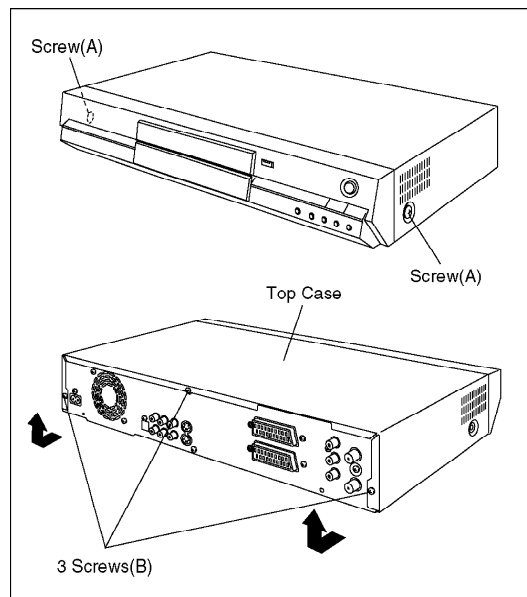


9.2. P.C.B. Positions



9.3. Top Case

1. Remove the 2 screws (A) and 3 screws (B).
2. Open the both ends at rear side of the Top Case a little and lift the Top Case in the direction of the arrows.



9.4. Digital P.C.B.

When replacing with Digital P.C.B., "UNFORMAT" indication is displayed and HDD must be formatted.

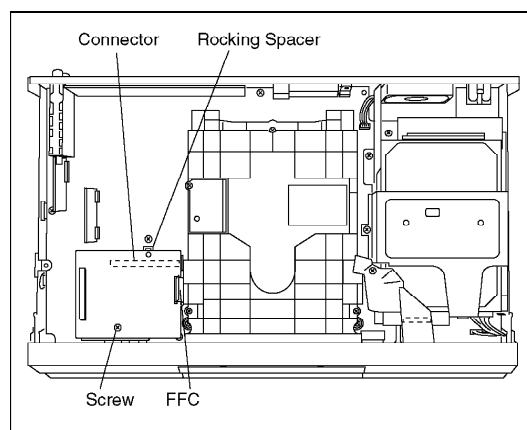
After that, programme in the HDD will be lost.

- How to format the HDD -

1) After "UNFORMAT" is displayed on the FL display, warning message for HDD format is appeared on the TV screen.

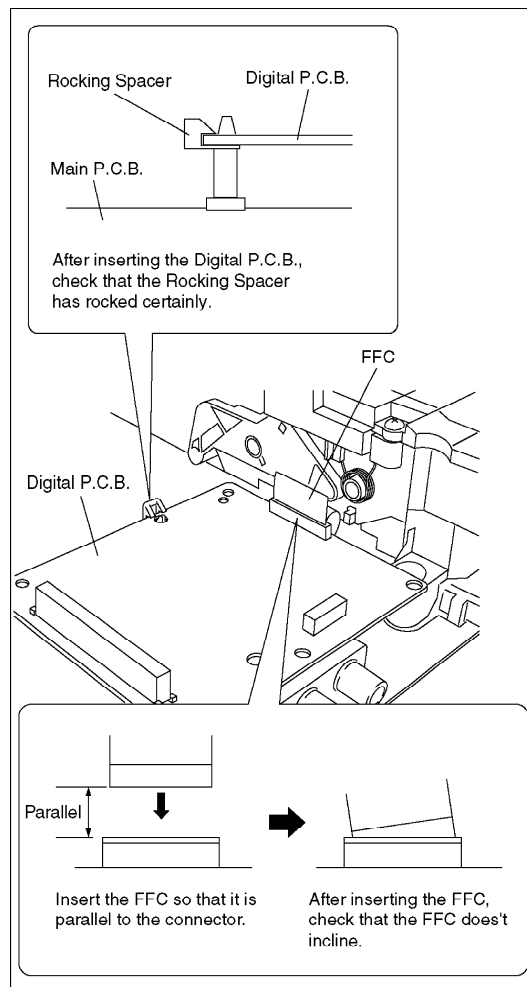
2) Select "YES" and press "ENTER" button on the remote controller, HDD will be formatted automatically.

1. Remove the FFC and a Screw.
2. Unlock a Rocking Spacer.
3. Lift up Digital P.C.B. slightly so to disconnect Connector to remove Digital P.C.B.



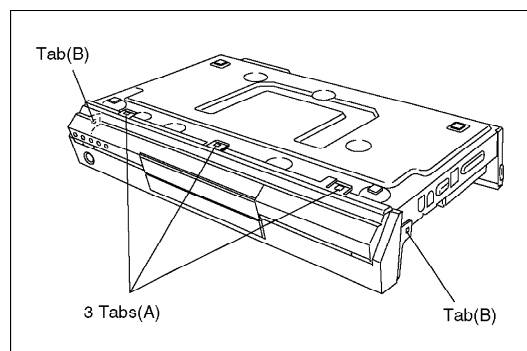
CAUTION:

When replacing Digital P.C.B., pay attention as below.

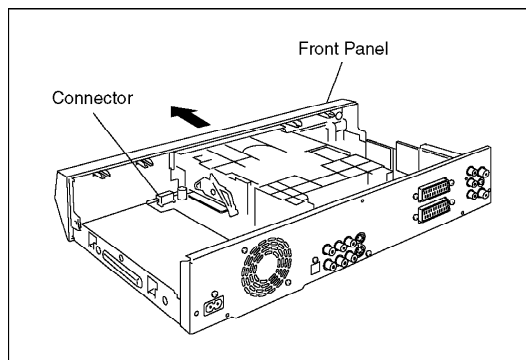


9.5. Front Panel

1. Remove 3 tabs (A) and 2 tabs (B) in this order. (The tab (A) and (B) should be removed at the same time, respectively.)

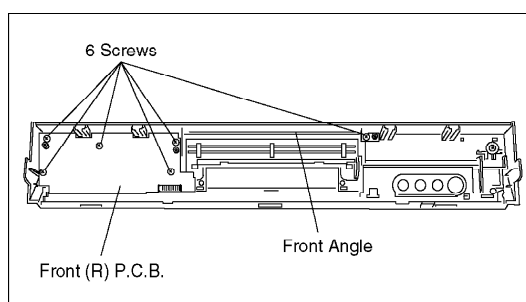


2. Move the front panel to front side straight and slowly so to remove it with Connector.



9.6. Front (R) P.C.B.

1. Remove 6 screws and Front Angle.



9.7. HDD

When replacing with HDD, "UNFORMAT" indication is displayed and HDD must be formatted.

After that, programme in the HDD will be lost.

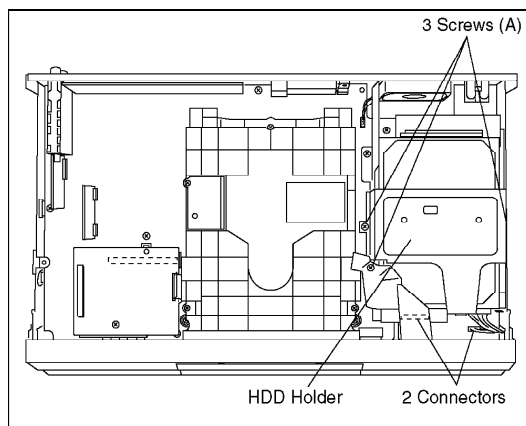
- How to format the HDD -

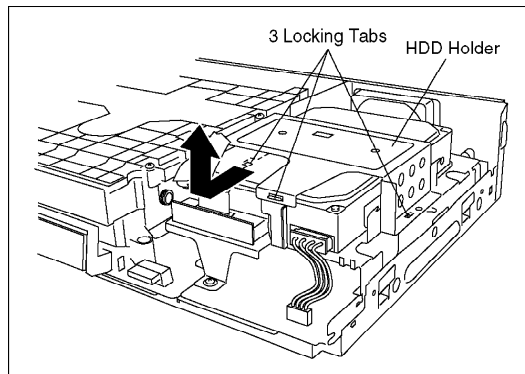
1) After "UNFORMAT" is displayed on the FL display, warning message for HDD format is appeared on the TV screen.

2) Select "YES" and press "ENTER" button on the remote controller, HDD will be formatted automatically.

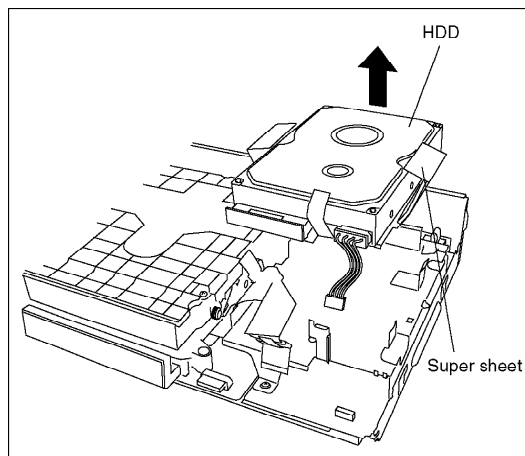
1. Remove 3 Screws (A) and 2 connectors.

2. Slide and lift up HDD Holder in the direction of the arrows so to unlock 3 locking tabs.





3. Lift up HDD with super sheet vertically and remove super sheet.



Handling of HDD

The following precautions should be taken when handling HDD.

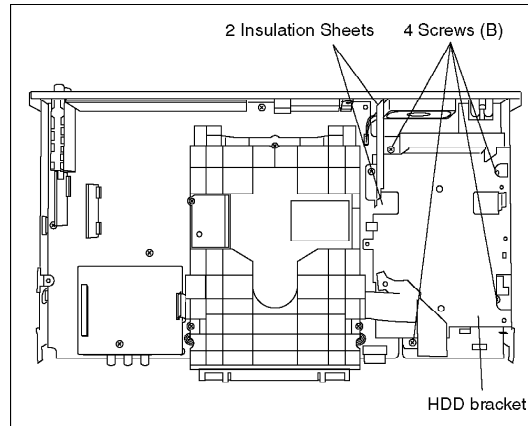
1. Never give an impact to HDD. (Even a drop from 1cm height can be a cause of HDD failure.)
2. When placing HDD on a workbench, provide a mat on a bench for shock absorption and anti-static purposes.
3. When installing HDD, release it from your hands only after confirming that it is fully set on the chassis.
4. Avoid stacking up HDD.
5. HDD is unstable and easy to fall. Do not stand it on its side face.
6. When handling HDD, hold its side faces to avoid static hazard.
7. Do not place HDD on its wrapping bag after removal. (Prevention of static hazard)
8. Use a screwdriver with low impact and anti-static features.
9. To replace HDD, remove the vertical short-circuit pin.
(Keep the horizontal short-circuit pin in its place)

Note:

**When replacing HDD, please make the rear jumper slave or cable select configuration.
(same configuration as HDD to exchange)**

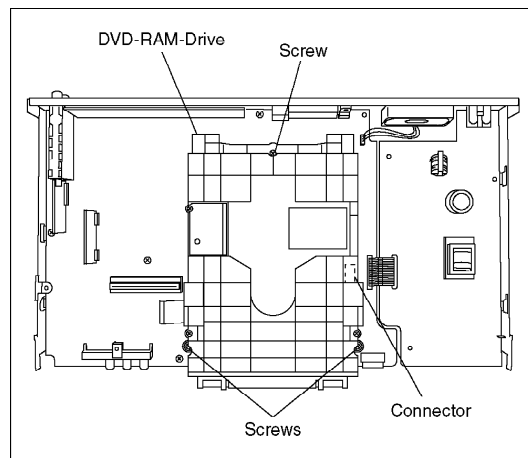
9.8. HDD Bracket

1. Remove 4 screws (B) and HDD Bracket with 2 Insulation Sheets.



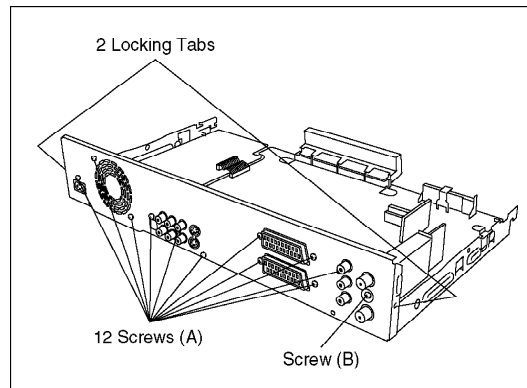
9.9. DVD-RAM Drive

1. Remove 3 Screws.
2. Pull out DVD-RAM Drive vertically so to remove it with Connector.



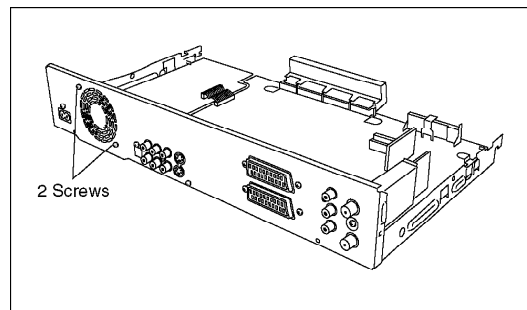
9.10. Rear Panel

1. Remove the 12 screws (A) and screw (B).
2. Unlock 2 Locking Tabs to remove Rear Panel.

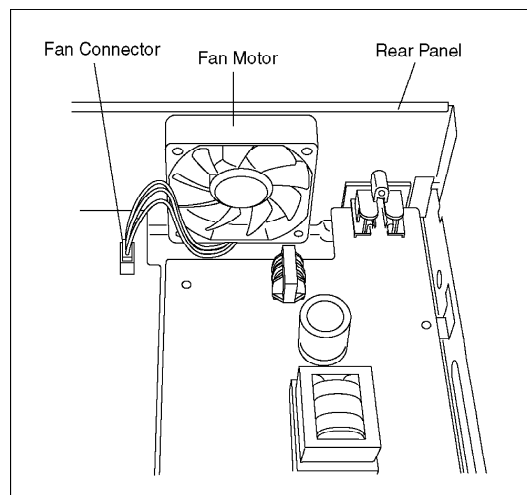


9.10.1. Only Fan Motor

1. Remove the 2 screws.

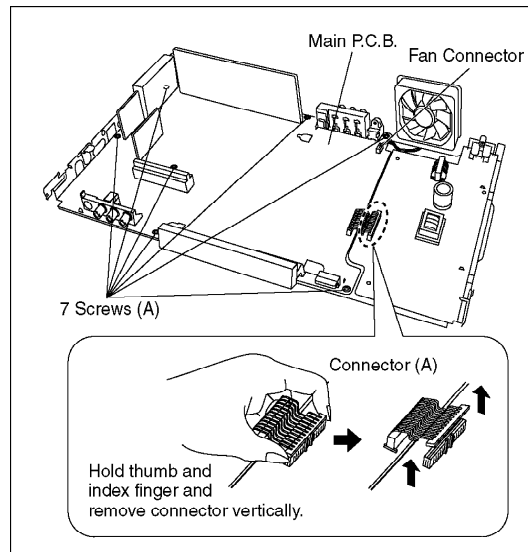


2. Remove Fan Connector to remove Fan Motor.

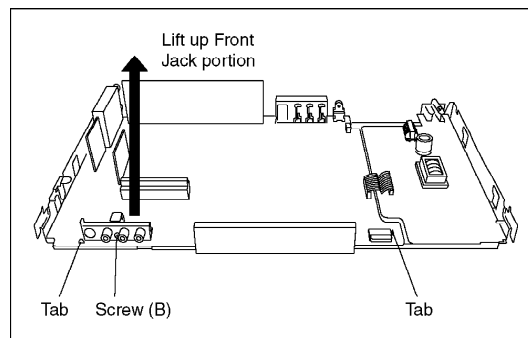


9.11. Main P.C.B.

1. Remove the 7 screws (A), Connector (A) and Fan Connector.

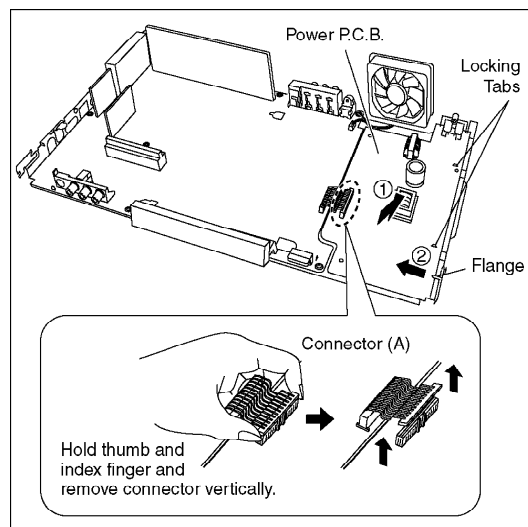


2. Remove a Screw (B) and lift up Front Jack portion of Main P.C.B. slightly so to unlock Tab to remove Main P.C.B..



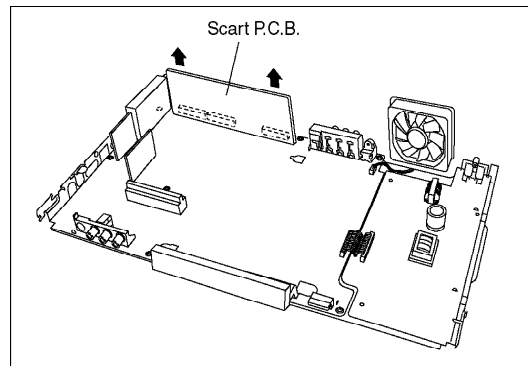
9.12. Power P.C.B.

1. Lift up Power P.C.B. a little so to unlock 2 Tabs and slide Power P.C.B. so to unlock Flange to remove Power P.C.B.



9.13. The Scart P.C.B.

1. Pull out the Scart P.C.B. in the direction of the arrow.



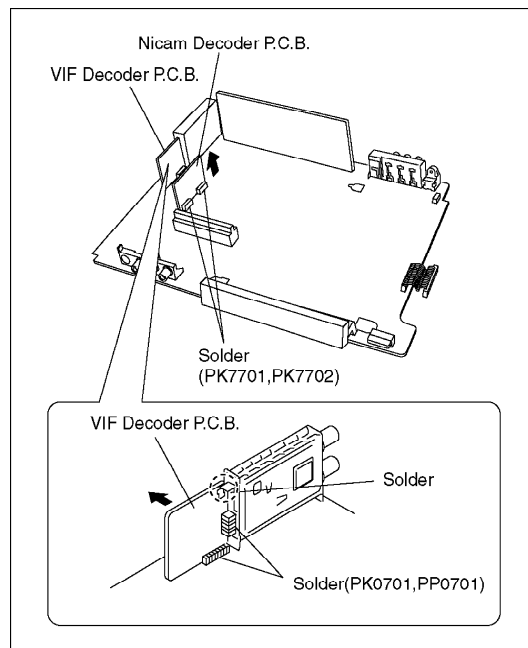
Note:

At first disconnect the connector on one side, and pull out the Scart P.C.B.



9.14. VIF Decoder P.C.B. and Nicam Decoder P.C.B.

1. Remove the solders.
2. Pull out the VIF Decoder P.C.B. and Nicam Decoder P.C.B.



10. Service Fixture and Tools

Part Number	Description	Compatibilit
RFKZ0125	Extension FFC (Digital P.C.B. - DVD-RAM Drive / 40 Pin)	Same as E50 series
RFKZ0168	Extension Cable (Main P.C.B. - Fan / 3 Pin)	Same as E50 series
RFKZ0169	Extension Cable (Power P.C.B. - HDD / 4 Pin)	Same as E100H seri
RFKZ0197	Extension Cable (Main P.C.B. - DVD-RAM Drive / 8 Pin)	New
RFKZ0214	Extension Cable (MainP.C.B. - Digital P.C.B. / 88 Pin)	New
RFKZ0215	Extension Cable (MainP.C.B. - Front (R) P.C.B. / 12 Pin)	New
RFKZ0216	Extension Cable (MainP.C.B. - Power P.C.B. / 23 Pin)	New

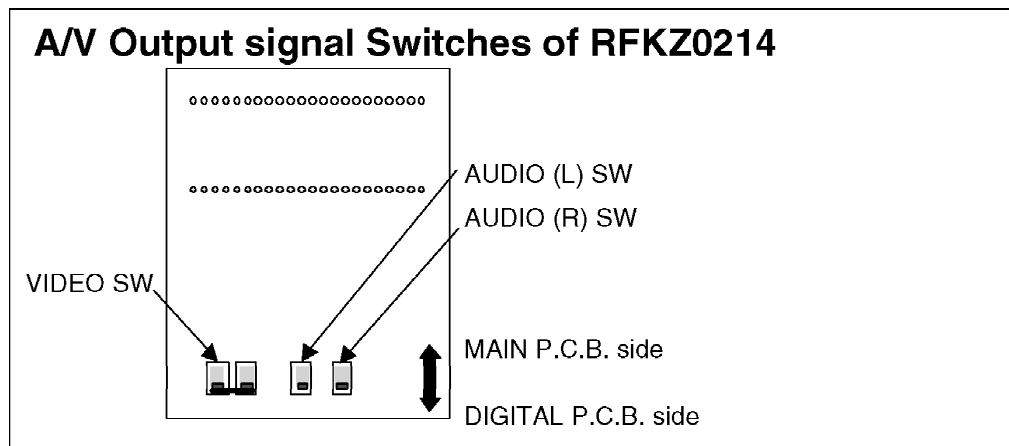
NOTE:

Extension Cable RFKZ0214 has A/V Output Signal switches.

Output signals can be switched from MAIN P.C.B. side or DIGITAL P.C.B. side.

When check MAIN P.C.B., turn switches to MAIN PCB side.

When check DIGITAL P.C.B., turn switches to DIGITAL P.C.B. side.

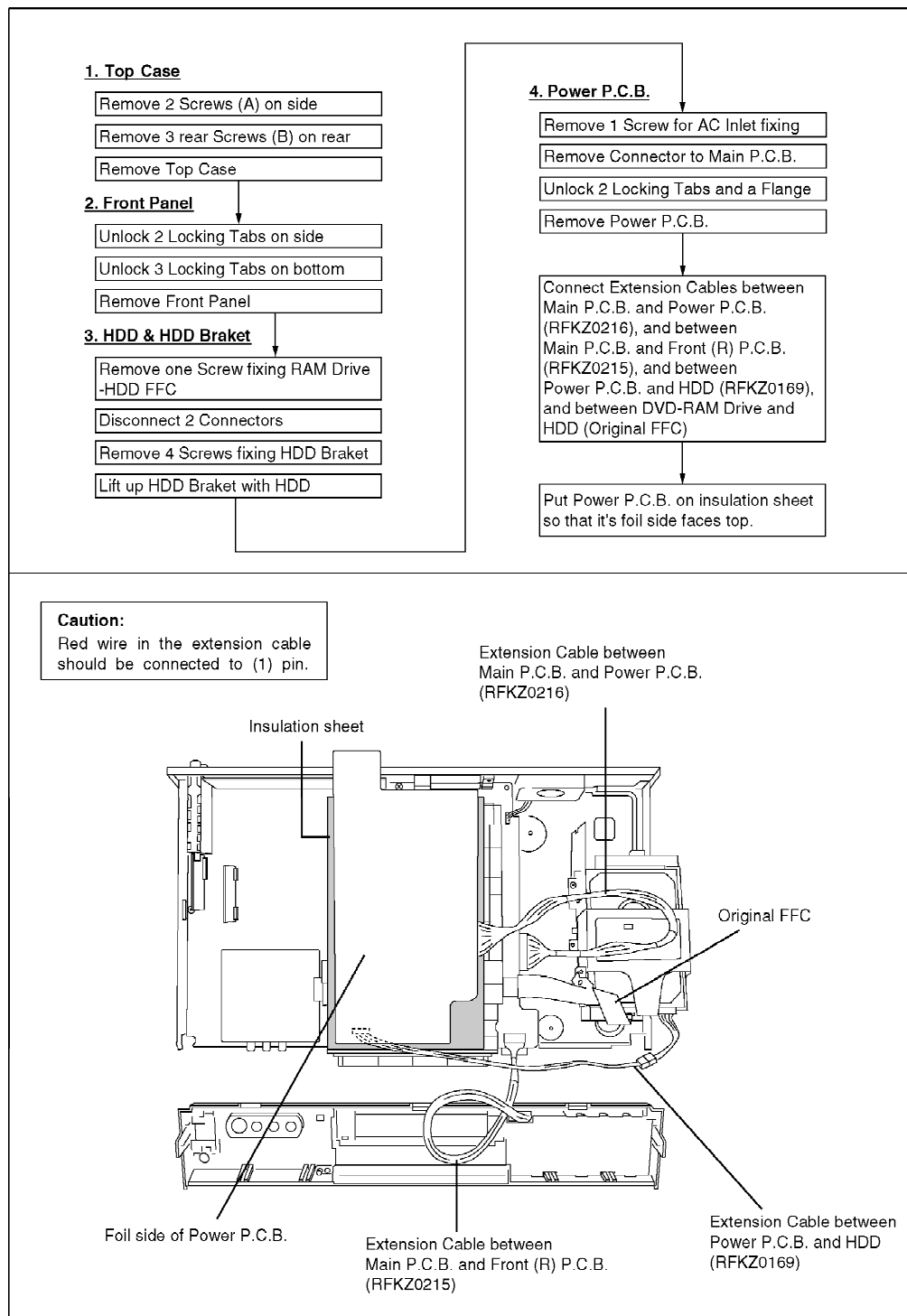


11. Service Positions

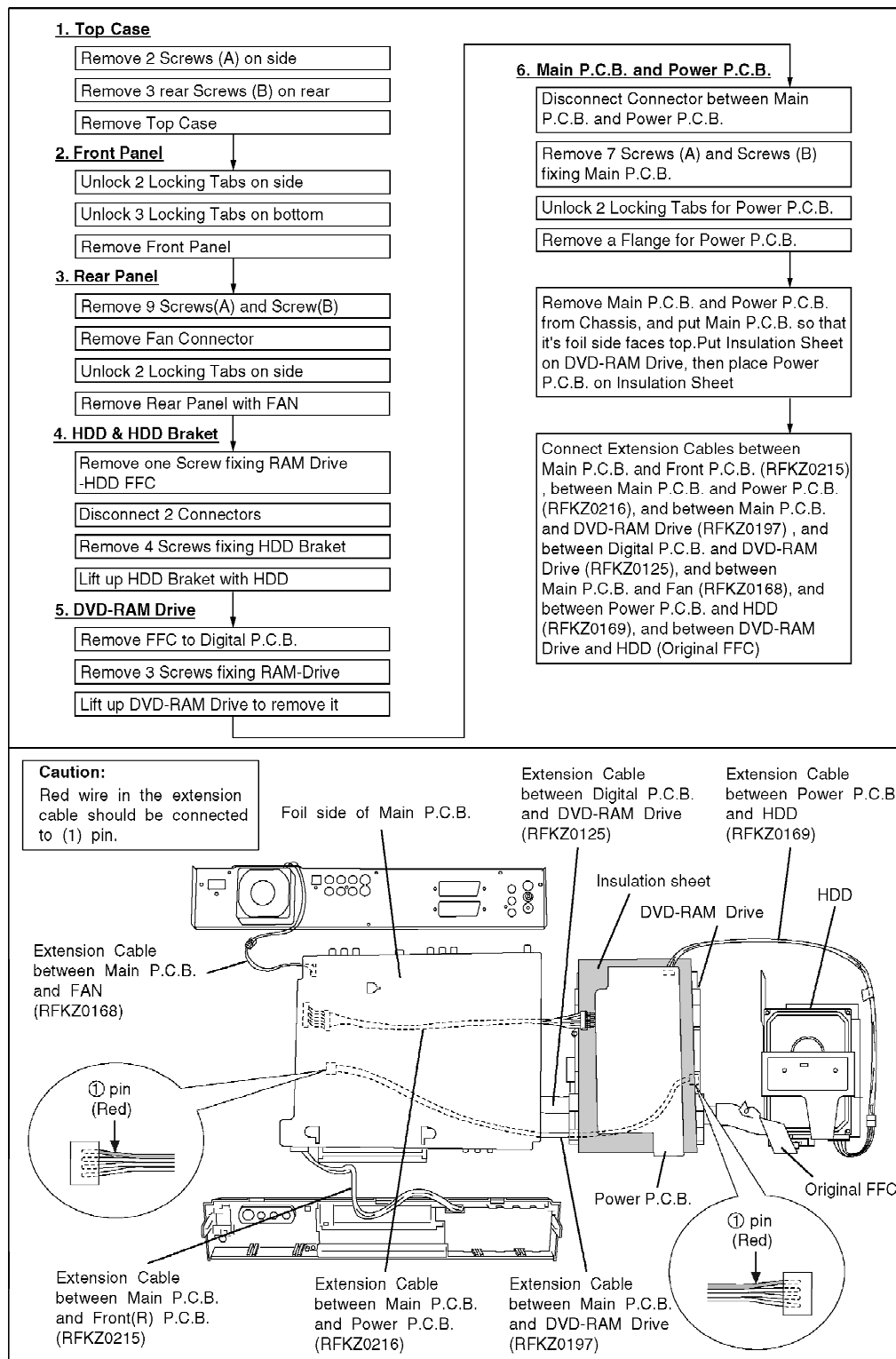
Note:

For description of the disassembling procedure, see the section 9.

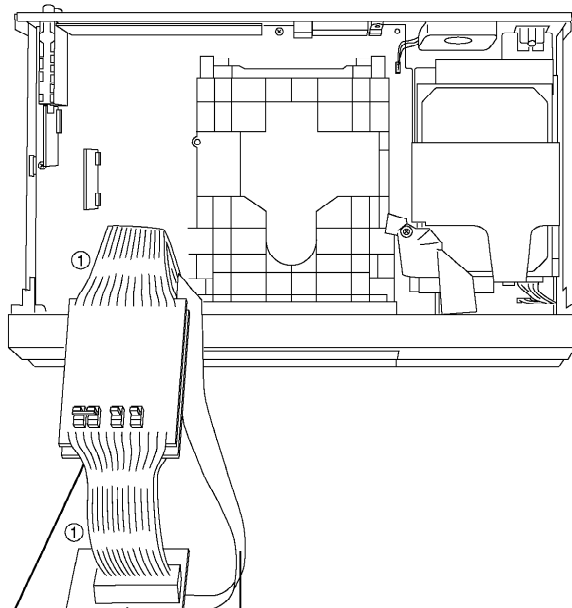
11.1. Checking and Repairing of Power P.C.B.



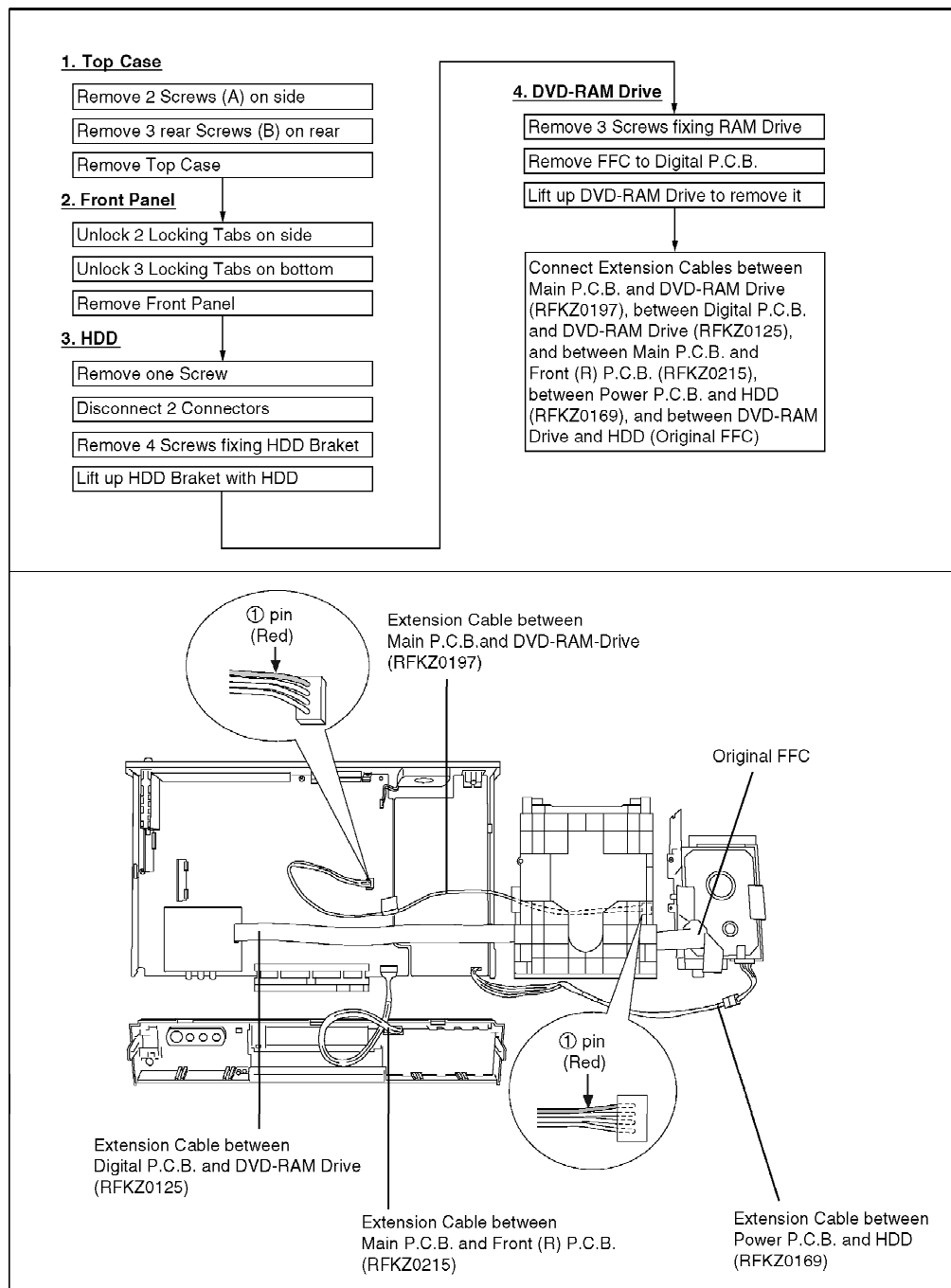
11.2. Checking and Repairing of Main P.C.B.



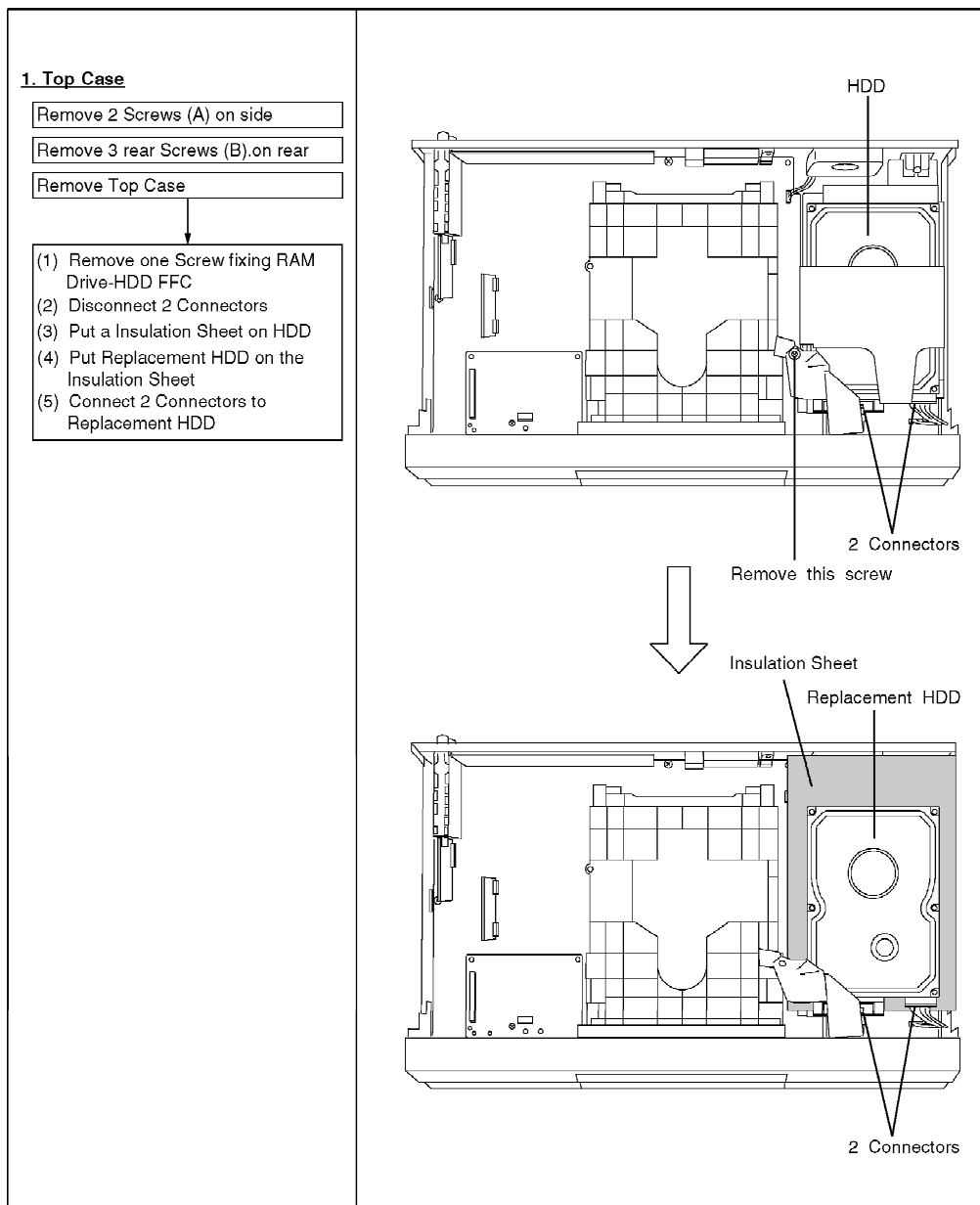
11.3. Checking and Repairing of Digital P.C.B.

<p>1. Top Case</p> <p>Remove 2 Screws (A) on side</p> <p>Remove 3 rear Screws (B) on rear</p> <p>Remove Top Case</p> <p>2. Digital P.C.B.</p> <p>Remove FFC to RAM-Drive</p> <p>Unlock a Rocking Spacer</p> <p>Remove a Screw fixing Digital P.C.B.</p> <p>Lift up Digital P.C.B. to remove it</p> <p>Connect Extension Cables between Main P.C.B. and Digital P.C.B. (RFKZ0214), and between Digital P.C.B. and DVD-RAM Drive (RFKZ0125).</p>	<p>Extension Cable between Main P.C.B. and Digital P.C.B. (RFKZ0214)</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>Caution: Red wire in the extension cable should be connected to (1) pin.</p> </div>  <p>Red Wire</p> <p>Digital P.C.B.</p> <p>Extension Cable between Digital P.C.B. and DVD-RAM Drive (RFKZ0125)</p>
--	---

11.4. Checking and Repairing of DVD-RAM Drive



11.5. Checking and Repairing of HDD



12. Adjustment Procedures

12.1. After replacing the RAM Drive with new one

After replacing of RAM drive unit, TEST mode is not necessary. Please confirm operation for RAM drive.

12.2. When the unit does not operate normally after replacing the Timer Microprocessor with new one

in order to transmit the

Step	Operation	Descriptions
1	While power is ON, short IC7508-4 pin (RESET) and the GND.	“RESET (L)” is transmitted to the terminal of Timer Microprocessor (11 pin), then the unit operates normally.

13. Standard Inspection Specifications after Making Repairs

After making repairs, we recommend performing the following inspection, to check normal operation.

No.	Procedure	Item to Check
1	Turn on the power, and confirm items pointed out.	Items pointed out should reappear.
2	Insert RAM disc.	The Panasonic RAM disc should be recognized.
3	Enter the EE (TU IN / AV IN - AV OUT) mode.	No abnormality should be seen in the picture sound or operation.
4	Perform auto recording and playback for one minute using the RAM disc.	No abnormality should be seen in the picture sound or operation.
5	Model with the HDD : Perform auto recording and playback for one minute using the HDD	No abnormality should be seen in the picture sound or operation. *Panasonic DVD-R disc should be used for recording and playback.
6	If a problem is caused by a VCD, DVD-R, DVD-Video, Audio-CD, or MP3, playback the test disc.	No abnormality should be seen in the picture sound or operation.
7	After checking and making repairs, upgrade the firmware to the latest version.	Make sure that [FIRM_SUCCESS] appears on the FL displays. *[UNSUPPORT] display means the unit is updated to newest same version. Then version up is not necessary.
8	Transfer [9][9] in the service mode setting, and initialize the service settings (return various settings and error information to their default values. The laser time is not included in this initialization).	Make sure that [CLR SERV] appears in the display. After checking it, turn the power off.
9	When replacing of RAM drive, transfer [9] [5] in the service mode setting to delete Laser used time.	Make sure that [CLR LASER] appears in the display. After that, turn power off.

Use the following checklist to establish the judgement criteria for the picture and sound.

Item	Contents	Check	Item	Contents
Picture	Block noise		Sound	Distorted sound
	Crosscut noise			Noise (static, background noise, etc.)
	Dot noise			The sound level is too low.
	Picture disruption			The sound level is too high.
	Not bright enough			The sound level changes.
	Too bright			
	Flickering color			
	Color fading			

14. Voltage and Waveform Chart

Note)

- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard.
Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.

14.1. Power P.C.B.

14.2. Main P.C.B.

14.3. Nicam Decoder P.C.B.

14.4. Scart P.C.B.

14.5. Front (R) P.C.B.

14.6. P9001 Connector

14.7. Waveform Chart

Note:

The waveforms are measured with PAL colour bar signal.

15. Abbreviations

INITIAL/LOGO		ABBREVIATIONS
A	A0~UP	ADDRESS
	ACLK	AUDIO CLOCK
	AD0~UP	ADDRESS BUS
	ADATA	AUDIO PES PACKET DATA
	ALE	ADDRESS LATCH ENABLE
	AMUTE	AUDIO MUTE
	AREQ	AUDIO PES PACKET REQUEST
	ARF	
	ASI	AUDIO RF
	ASO	SERVO AMP INVERTED INPUT
	ASYNC	SERVO AMPOUTPUT
		AUDIO WORD DISTINCTION SYNC
B	BCK	BIT CLOCK (PCM)
	BCKIN	BIT CLOCK INPUT
	BDO	BLACK DROP OUT
	BLKCK	SUB CODE BLOCK CLOCK
	BOTTOM	CAP. FOR BOTTOM HOLD
	BYP	BYPATH
	BYTCK	BYTE CLOCK
C	CAV	CONSTANT ANGULAR
	CBDO	VELOCITY
	CD	CAP. BLACK DROP OUT
	CDSCK	COMPACT DISC
	CDSRDATA	CD SERIAL DATA CLOCK
		CD SERIAL DATA
	CDRF	CD RF (EFM) SIGNAL
	CDV	COMPACT DISC-VIDEO
	CHNDATA	CHANNEL DATA
	CKSL	SYSTEM CLOCKSELECT
	CLV	CONSTANT LINEAR VELOCITY
	COFTR	CAP. OFF TRACK
	CPA	CPU ADDRESS
	CPCS	CPU CHIP SELECT
	CPDT	CPU DATA
	CPUADR	CPU ADDRESS LATCH
	CPUADT	CPU ADDRESS DATA BUS
	CPUIRQ	CPU INTERRUPT REQUEST
	CPRD	CPU READ ENABLE
	CPWR	CPU WRITE ENABLE
	CS	CHIPSELECT
	CSYNCIN	COMPOSITE SYNC IN
	CSYNCOU	COMPOSITE SYNC OUT

INITIAL/LOGO		ABBREVIATIONS
D	DACCK	D/A CONVERTER CLOCK
	DEEMP	DEEMPHASIS BIT ON/OFF
	DEMPH	DEEMPHASIS SWITCHING
	DIG0~UP	FL DIGIT OUTPUT
	DIN	DATA INPUT
	DMSRCK	DM SERIAL DATA READ
	DMUTE	CLOCK
	DO	DIGITAL MUTE CONTROL
	DOUT0~UP	DROP OUT
		DATAOUTPUT
	DRF	DATA SLICE RF (BIAS)
	DRPOUT	DROP OUT SIGNAL
	DREQ	DATA REQUEST
	DRESP	DATA RESPONSE
	DSC	DIGITAL SERVO CONTROLLER
	DSLIF	
	DVD	DATA SLICE LOOP FILTER
		DIGITAL VIDEO DISC

INITIAL/LOGO		ABBREVIATIONS
E	EC	ERROR TORQUE CONTROL
	ECR	ERROR TORQUE CONTROL REFERENCE
	ENCSEL	ENCODER SELECT
	ETMCLK	EXTERNAL M CLOCK (81MHz/40.5MHz)
	ETSCLK	EXTERNAL S CLOCK (54MHz)
F	FBAL	FOCUS BALANCE
	FCLK	FRAME CLOCK
	FE	FOCUS ERROR
	FFI	FOCUS ERROR AMP
	FEO	INVERTED INPUT
	FG	FOCUS ERROR AMP OUTPUT
	FSC	FREQUENCY GENERATOR
	FSCK	FREQUENCY SUB CARRIER FS (384 OVER SAMPLING) CLOCK
G	GND	COMMON GROUNDING (EARTH)
H	HA0~UP	HOST ADDRESS
	HD0~UP	HOST DATA
	HINT	HOST INTERRUPT
	HRXW	HOST READ/WRITE

INITIAL/LOGO		ABBREVIATIONS
I	IECOUT IPFRAG IREF ISEL	IEC958 FORMAT DATA OUTPUT INTERPOLATION FLAG I (CURRENT) REFERENCE INTERFACE MODE SELECT
L	LDON LPC LRCK	LASER DIODE CONTROL LASER POWER CONTROL L CH/R CH DISTINCTION CLOCK
M	MA0~UP MCK MCKI MCLK MDATA MDQ0~UP MDQM MLD MPEG	MEMORY ADDRESS MEMORY CLOCK MEMORY CLOCK INPUT MEMORY SERIAL COMMAND CLOCK MEMORY SERIAL COMMAND DATA MEMORY DATA INPUT/OUTPUT MEMORY DATA I/O MASK MEMORYSERIAL COMMAND LOAD MOVING PICTURE EXPERTS GROUP
O	ODC OFTR OSCI OSCO OSD	OPTICAL DISC CONTROLLER OFF TRACKING OSCILLATOR INPUT OSCILLATOR OUTPUT ON SCREEN DISPLAY
P	P1~UP PCD PCK PDVD PEAK PLLCLK / PLLOK PWMCTL PWMDA PWMOA, B	PORT CD TRACKING PHASE DIFFERENCE PLL CLOCK DVD TRACKING PHASE DIFFERENCE CAP. FOR PEAK HOLD CHANNEL PLL CLOCK PLL LOCK PWM OUTPUT CONTROL PULSE WAVE MOTOR DRIVEA PULSE WAVE MOTOR OUT A, B

INITIAL/LOGO		ABBREVIATIONS
R	RE	READ ENABLE
	RFENV	RF ENVELOPE
	RFO	RF PHASE DIFFERENCE
	RS	OUTPUT
	RSEL	(CD-ROM) REGISTER SELECT
	RST	RF POLARITY SELECT
	RSV	RESET RESERVE
S	SBI0, 1	SERIAL DATA INPUT
	SBO0	SERIAL DATA OUTPUT
	SBT0, 1	SERIAL CLOCK
	SCK	SERIAL DATA CLOCK
	SCKR	AUDIO SERIAL CLOCK
	SCL	RECEIVER
	SCLK	SERIAL CLOCK
	SDA	SERIAL CLOCK
	SEG0~UP	SERIAL DATA
	SELCLK	FL SEGMENT OUTPUT
	SEN	SELECTCLOCK
	SIN1, 2	SERIAL PORT ENABLE
	SOUT1, 2	SERIAL DATA IN
	SPDI	SERIAL DATA OUT
	SPDO	SERIAL PORT DATA INPUT
	SPEN	SERIAL PORT DATA OUTPUT
	SPRCLK	SERIAL PORT R/W ENABLE
	SPWCLK	SERIAL PORT READ CLOCK
	SQCK	SERIAL PORT WRITE CLOCK
	SQCX	SUB CODE Q CLOCK
	SRDATA	SUBCODE Q DATA READ
	SRMADR	CLOCK
	SRMDT0~7	SERIAL DATA SRAM ADDRESS BUS
	SS	SRAM DATA BUS 0~7
	STAT	START/STOP
	STCLK	STATUS
	STD0~UP	STREAM DATA CLOCK
	STENABLE	STREAM DATA STREAM DATA INPUT ENABLE
	STSEL	STREAM DATA POLARITY
	STVALID	SELECT
	SUBC	STREAM DATAVALIDITY
	SBCK	SUB CODE SERIAL
	SUBQ	SUB CODE CLOCK
	SYSCLK	SUB CODE Q DATA

	SYSTEM CLOCK
INITIAL/LOGO	ABBREVIATIONS
T	TE TIBAL TID TIN TIP TIS TPSN TPSO TPSP TRCRS TRON TRSON
	TRACKING ERROR BALANCE CONTROL BALANCE OUTPUT 1 BALANCE INPUT BALANCE INPUT BALANCE OUTPUT 2 OP AMP INPUT OP AMP OUTPUT OP AMP INVERTED INPUT TRACK CROSS SIGNAL TRACKING ON TRAVERSE SERVO ON

INITIAL/LOGO	ABBREVIATIONS
V	VBLANK VCC VCDCONT VDD VFB VREF VSS
	V BLANKING COLLECTOR POWER SUPPLY VOLTAGE VIDEO CD CONTROL (TRACKING BALANCE) DRAIN POWER SUPPLY VOLTAGE VIDEO FEED BACK VOLTAGE REFERENCE SOURCE POWER SUPPLY VOLTAGE
W	WAIT WDCK WEH WSR
	BUS CYCLE WAIT WORD CLOCK WRITE ENABLE HIGH WORD SELECT RECEIVER

INITIAL/LOGO		ABBREVIATIONS
X	X	X' TAL
	XALE	X ADDRESS LATCH ENABLE
	XAREQ	X AUDIO DATA REQUEST
	XCDROM	X CD ROM CHIP SELECT
	XCS	X CHIP SELECT
	XCSYNC	X COMPOSITE SYNC
	XDS	X DATA STROBE
	XHSYNCO	X HORIZONTAL SYNC OUTPUT
	XHINT	XH INTERRUPTREQUEST
	XI	X' TAL OSCILLATOR INPUT
	XINT	X INTERRUPT
	XMW	X MEMORY WRITE ENABLE
	XO	X' TAL OSCILLATOR OUTPUT
	XRE	X READ ENABLE
	XSRMCE	X SRAM CHIP ENABLE
	XSRMOE	X SRAM OUTPUT ENABLE
	XSRMWE	X SRAM WRITE ENABLE
	XVCS	X V-DEC CHIPSELECT
	XVDS	X V-DEC CONTROL BUS
	XVSYNCO	STROBE
		X VERTICAL SYNC OUTPUT

16. Block Diagram

16.1. Power Supply Block Diagram

16.2. Analog Video Block Diagram

16.3. Analog Audio Block Diagram

16.4. Timer Block Diagram

16.5. Digital Block Diagram

16.6. Digital Block IC Pin Terminal Chart

17. Schematic Diagram

17.1. Interconnection Schematic Diagram

17.2. Main Power Supply Schematic Diagram

17.3. Sub Power Supply Section (Main P.C.B. (1/5)) Schematic

Diagram (P)

17.4. Main Net Section (Main P.C.B. (2/5)) Schematic Diagram (M)

17.5. Video I/O Section (Main P.C.B. (3/5)) Schematic Diagram (V)

17.6. Audio Main Section (Main P.C.B. (4/5)) Schematic Diagram (A)

17.7. Timer Section (Main P.C.B. (5/5)) Schematic Diagram (T)

17.8. Glue Net Section (Digital P.C.B. (1/5)) Schematic Diagram (GN)

17.9. AV Encoder Section (Digital P.C.B. (2/5)) Schematic Diagram (EN)

17.10. Real Time Stream Control (RTSC) Section (Digital P.C.B. (3/5)) Schematic Diagram (TR)

17.11. AV Decoder/Main CPU Section (Digital P.C.B. (4/5)) Schematic Diagram (MC)

17.12. Audio I/O Section (Digital P.C.B. (5/5)) Schematic Diagram (AI)

17.13. VIF Decoder Schematic Diagram

17.14. Nicam Decoder Schematic Diagram

17.15. Scart Schematic Diagram

17.16. Front (R) Schematic Diagram

18. Print Circuit Board

18.1. Power P.C.B.

18.2. Main P.C.B.

18.2.1. Main P.C.B. (1/4 Section)

18.2.2. Main P.C.B. (2/4 Section)

18.2.3. Main P.C.B. (3/4 Section)

18.2.4. Main P.C.B. (4/4 Section)

18.2.5. Main P.C.B. Address Information

18.3. Digital P.C.B.

18.3.1. Digital P.C.B. (Component Side)

18.3.2. Digital P.C.B. (Foil Side)

18.3.3. Digital P.C.B. Address Information

18.4. VIF Decoder P.C.B.

18.5. Nicam Decoder P.C.B.

18.6. Scart P.C.B.

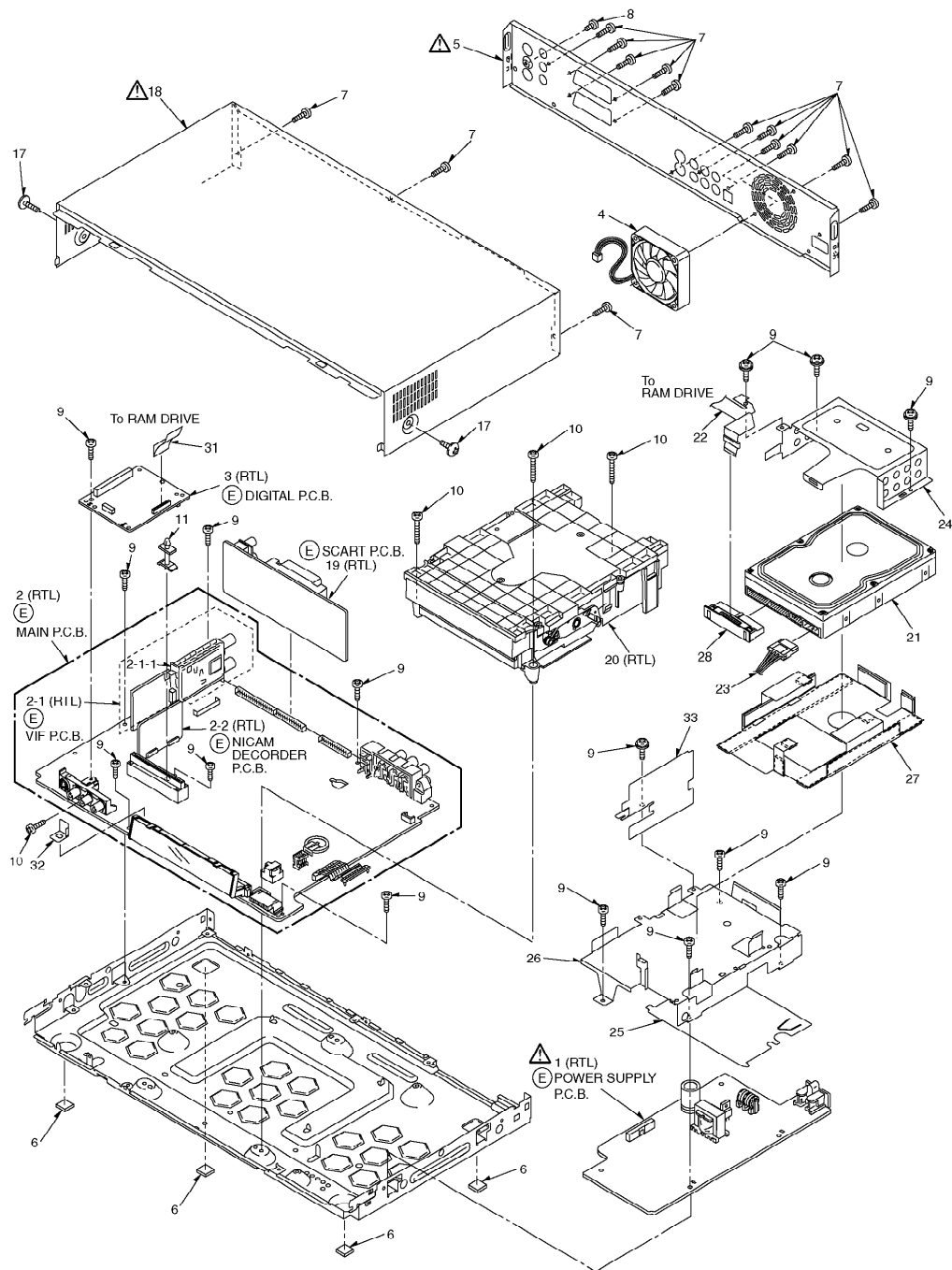
18.6.1. Scart P.C.B. (Section 1/2)

18.6.2. Scart P.C.B. (Section 2/2)

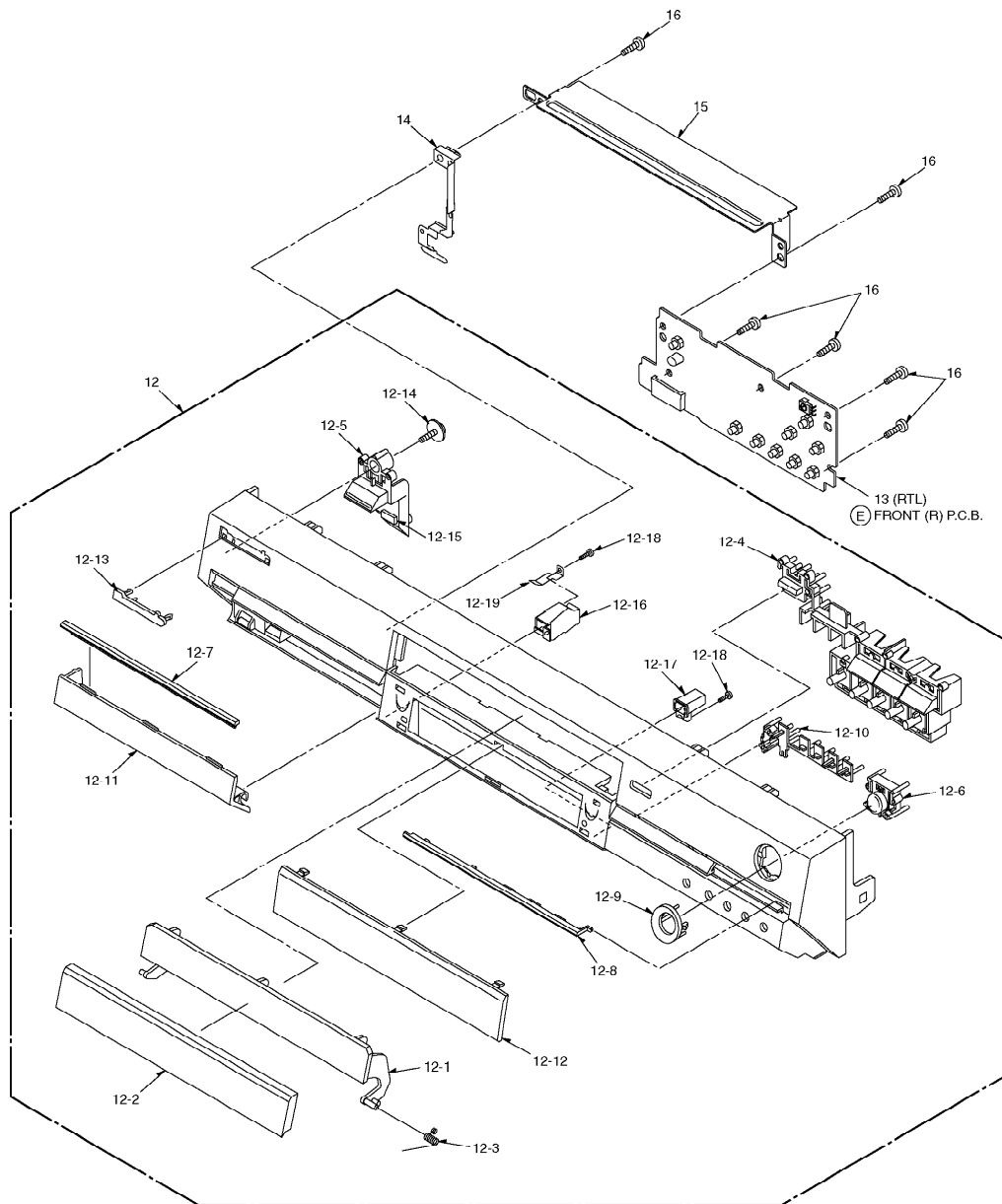
18.7. Front (R) P.C.B.

19. Exploded Views

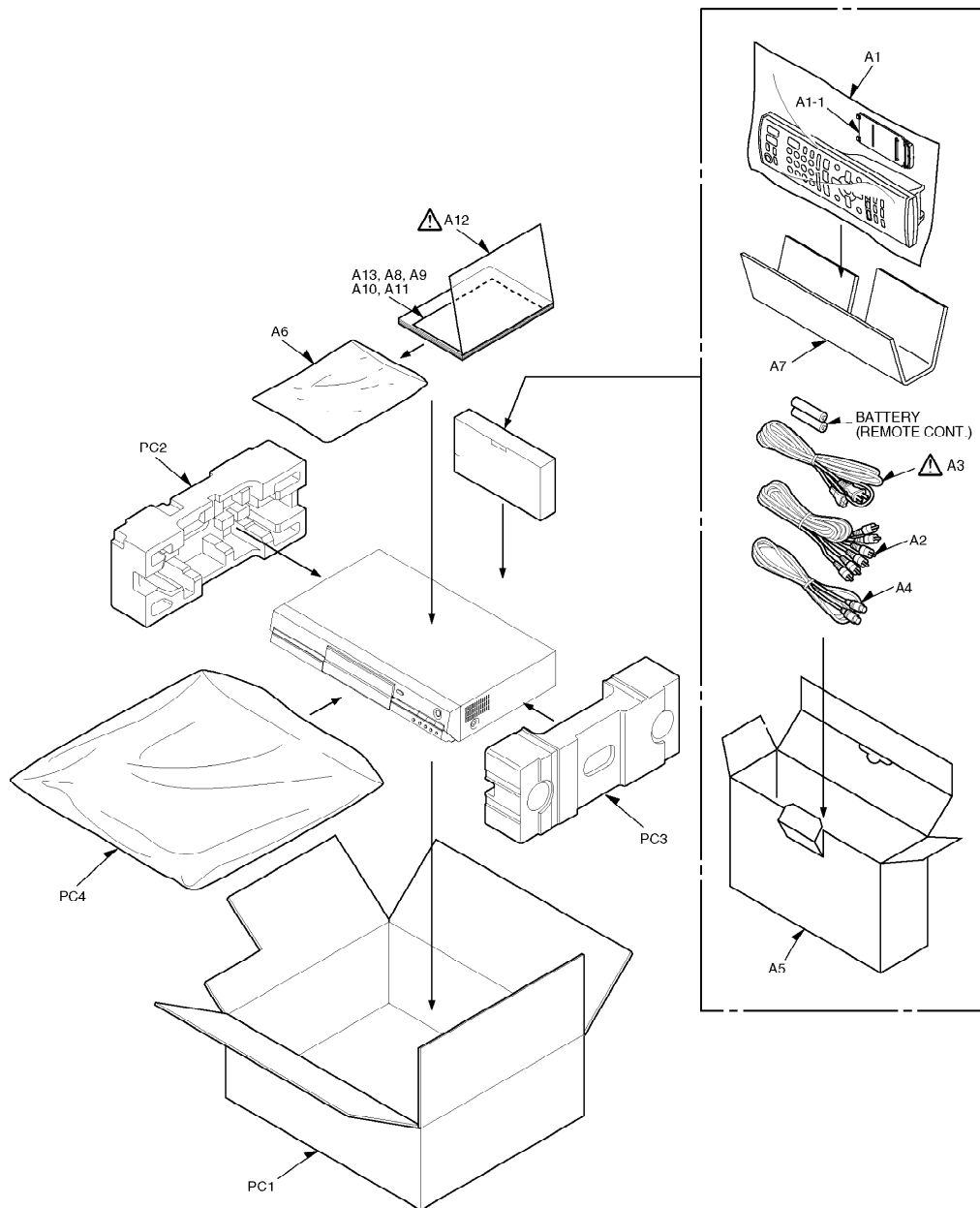
19.1. Casing Parts & Mechanism Section 1



19.2. Casing Parts & Mechanism Section 2



19.3. Packing & Accessories Section



20. Replacement Parts List

Notes:

*Important safety notice:

Components identified by  mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

When replacing any of components, be sure to use only manufactures specified parts shown in the parts list.

*Warning: This product uses a laser diode. Refer to caution statements.

*Capacity values are in microfarads (μ F) unless specified otherwise, P=Pico-farads (pF), F= Farads (F).

*Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM), 1M=1,000k (OHM).

*The marking (RTL) indicates the retention time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.

**“<IA>”-“<ID>”, marks in Remarks indicate languages of instruction manuals. [<IA>: English/ Chinese, <IB>: English, <IC>:Chinese, <ID>: English/ Arabic] All parts are supplied by S.P.C..


Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
	01	CASING/ACCESSORY/PACKING		
1	ETXMM507E4F	POWER SUPPLY P.C.B.	1	(RTL) 
2	REP3766C	MAIN P.C.B.	1	(RTL)
2-1	VEP07A71N	VIF P.C.B.	1	(RTL)
2-1-1	VMP5897	VIF ANGLE	1	
2-2	VEP07A51A	NICAM DECORDER P.C.B.	1	(RTL)
3	RFKBE85HEE	DIGITAL P.C.B.	1	(EE)
3	RFKBE85HGCS	DIGITAL P.C.B.	1	(GCS)
3	RFKBE85HGN	DIGITAL P.C.B.	1	(GN)
4	L6FAKCCE0002	FAN MOTOR	1	
5	RGR0350C1E	REAR PANEL	1	(EE) 
5	RGR0350C1K	REAR PANEL	1	(GCS) 
5	RGR0350C1L	REAR PANEL	1	(GN) 
6	RKA0144-K	FOOT RUBBER	4	
7	VHD0690	SCREW	14	
8	XSN3+4FZ	SCREW	1	
9	RHD30111	SCREW	15	
10	RHD30115	SCREW	4	
11	RMX0298	PCB SPACER	1	
12	RYP1243B-S	FRONT PANEL ASS'Y1	1	(EE)
12	RYP1243D-S	FRONT PANEL ASS'Y1	1	(GN,GCS)
12-1	RKF0700-S	TRAY DOOR	1	
12-2	RGK1810-S	TRAY ORNAMENT	1	
12-3	VMB3410	TRAY SPRING	1	
12-4	RGU2318A-S	OPERATION BUTTON	1	
12-5	RGU2289-S	POWER BUTTON	1	
12-6	RGU2291A-Q	REC BUTTON	1	
12-7	RGK1774-S	FRONT ORNAMENT(L)	1	
12-8	RGK1775-S	FRONT ORNAMENT(R)	1	
12-9	RGK1773-S	REC BUTTON RING	1	
12-10	RGL0663-Q	PANEL LIGHT	1	
12-11	RKF0689B-S	PANEL DOOR	1	(EE)
12-11	RKF0689D-S	PANEL DOOR	1	(GN,GCS)
12-12	RGK1811-S	FL ORNAMENT	1	
12-13	VGB0560	PANASONIC BADGE	1	
12-14	RHD26016	SCREW	1	
12-15	RMX0299	DAMPER SHEET	1	
12-16	RMR1637-W	REFLECTOR DVD	1	
12-17	RMR1638-W	REFLECTOR HDD	1	
12-18	XTN2+6G	SCREW	2	
12-19	RMR1655-W	REFLECTOR COVER	1	
13	REP3713B	FRONT(R) P.C.B.	1	(RTL)
14	RMC0595	EARTH PLATE	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
15	RMA1778	FRONT ANGLE	1	
16	XTBS26+10J	SCREW	6	
17	RHD30113	SCREW	2	
18	RKM0508-S	TOP COVER	1	
19	REP3682A	SCART P.C.B.	1	(RTL)
20	VXY1814	RAM DRIVE UNIT	1	(RTL)
21	RFKV0033HDK	HDD 80GB	1	
22	VEK0G75	FFC(42P)	1	
23	VEE0Z41	WIRE WITH CONNECTOR	1	
24	RMA1835	HDD HOLDER	1	
25	RMZ0747	INSULATED SHEET	1	
26	RMA1834	HDD BRACKET	1	
27	RXQ1208	SUPER SHEET UNIT	1	
28	K1MZ40Z00002	HDD CONNECTOR	1	
31	VWJ1724	FFC(42P)	1	
32	RMR1656-W	LED COVER	1	
33	RMV0282	BARRIER	1	
A1	EUR7721KH0	REMOTE CONTROL ASS'Y	1	(EE)
A1	EUR7721KK0	REMOTE CONTROL ASS'Y	1	(GN,GCS)
A1-1	UR77EC2003A	BATTERY COVER	1	
A2	K2KA6CA00001	AV CORD	1	
A3	K2CJ2DA00011	AC CORD	1	(GN) 
A3	VJA0664	AC CORD	1	K2CR2DA00004 (GCS,EE) 
A4	VJA1089	RF COAXIAL CABLE	1	K1TWACC00001
A5	RPQF0250	ACCESSORY CASE	1	
A6	RPF0378	POLYETHYLENE BAG(F.B.)	1	
A7	RPQ1594	PAD	1	
A8	RQCA1119	HDD CAUTION SHEET	1	(GN)
A8	RQCA1223	HDD CAUTION SHEET	1	(EE)
A8	RQCA1224	HDD CAUTION SHEET	1	(GCS)
A9	RQCA1231	PAL PROGRESSIVE SHEET	1	
A10	RQCA1244	DVD-R REC SHEET	1	(GN)
A10	RQCA1246	DVD-R REC SHEET	1	(EE)
A10	RQCA1247	DVD-R REC SHEET	1	(GCS)
A11	RQCB1141	CCP CARD	1	(GN)
A12	RQT7460-R	OPERATING INSTRUCTIONS	1	<IA>(EE) 
A12	RQT7461-G	OPERATING INSTRUCTIONS	1	<IB>(GCS) 
A12	RQT7462-L	OPERATING INSTRUCTIONS	1	<IC>(GN) 
A13	RQCA1217	DISC CAUTION SHEET	1	(EE)
A13	RQCA1004	DISC CAUTION SHEET	1	(GN)
A13	RQCA1218	DISC CAUTION SHEET	1	(GCS)
PC1	RPG7134	PACKING CASE	1	(EE)
PC1	RPG7135	PACKING CASE	1	(GCS)
PC1	RPG7136	PACKING CASE	1	(GN)
PC2	RPN1706A	CUSHION A	1	
PC3	RPN1706B	CUSHION B	1	
PC4	VPF0505	POLYETHYLENE BAG(UNIT)	1	
	02	REP3766C		(MAIN P.C.B.)


Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C1503	ECJ1VB1A105K	10V 1U	1	
C1504	ECJ1XB1C104K	16V 0.1U	1	
C1505	F2A1A470A388	10V 47U	1	
C1512	ECJ1VB0J105K	6.3V 1U	1	
C1513	ECJ1VB1A105K	10V 1U	1	
C1514	ECJ1VB0J105K	6.3V 1U	1	
C1515	ECJ1XB1C104K	16V 0.1U	1	
C1516	ECJ1VB1A105K	10V 1U	1	
C1518	F2A1A470A388	10V 47U	1	
C1519	ECJ1XB1C104K	16V 0.1U	1	
C1520	ECJ1VB1A105K	10V 1U	1	
C1521	ECJ1VB0J105K	6.3V 1U	1	
C1522	ECJ1VC1H331J	50V 330P	1	
C1523	ECJ1VB1A105K	10V 1U	1	
C1524	F2A1A470A388	10V 47U	1	
C1527,28	ECJ1VB0J105K	6.3V 1U	2	
C1531	F2A1A470A388	10V 47U	1	
C1533,34	ECJ1VB0J105K	6.3V 1U	2	
C1537	EEUFC1E101S	25V 100U	1	
C1539	F2A0J102A256	6.3V 1000U	1	
C1540	F2A1E4700048	25V 47U	1	
C1541	F2A1A471A211	10V 470U	1	
C1543	F2A1E221A210	25V 220U	1	
C3003	ECJ1VB1H103K	50V 0.01U	1	
C3004	ECEA1AKS221	10V 220U	1	
C3005	ECJ1VB1C333K	16V 0.033U	1	
C3006	ECJ1XB1C104K	16V 0.1U	1	
C3007	ECJ1VB1H103K	50V 0.01U	1	
C3009,10	ECJ1VB1H103K	50V 0.01U	2	
C3012-17	ECJ1VB1H103K	50V 0.01U	6	
C3018	ECEA0JKS101	6.3V 100U	1	
C3019-21	ECJ1VB1H103K	50V 0.01U	3	
C3022	ECEA0JKS220	6.3V 22U	1	
C3023	ECEA0JKN470	6.3V 47U	1	
C3024	ECEA0JKS220	6.3V 22U	1	
C3025-29	ECEA0JKN470	6.3V 47U	5	
C3030,31	ECJ1VB1H103K	50V 0.01U	2	
C3032	ECEA0JKS331	6.3V 330U	1	
C3033	ECEA1CKS220	16V 22U	1	
C3034	ECEA0JKS331	6.3V 330U	1	
C3035	ECEA1CKS220	16V 22U	1	
C3036	ECEA0JKS331	6.3V 330U	1	
C3037	ECEA1CKS220	16V 22U	1	
C3038	ECJ1XB1C104K	16V 0.1U	1	
C3039	ECJ1VB0J105K	6.3V 1U	1	
C3040	ECJ1VB1H103K	50V 0.01U	1	
C3041	ECEA1AKS221	10V 220U	1	
C3042	ECJ1VB0J105K	6.3V 1U	1	
C3045,46	ECEA0JKN470	6.3V 47U	2	
C3047	ECJ1XB1C104K	16V 0.1U	1	
C3048	ECA0JM102	6.3V 1000U	1	
C3049	ECEA0JKS101	6.3V 100U	1	
C3051	ECA0JM102	6.3V 1000U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C3052	ECEA0JKS101	6.3V 100U	1	
C3053	ECA0JM102	6.3V 1000U	1	
C3054	ECEA0JKS101	6.3V 100U	1	
C3055,56	ECEA0JKS331	6.3V 330U	2	
C3057-60	ECJ1VC1H471J	50V 470P	4	
C3061,62	ECJ1VC1H470J	50V 47P	2	
C3064	ECJ1XB1C104K	16V 0.1U	1	
C3065	ECJ1VB1H103K	50V 0.01U	1	
C3066,67	ECJ1VB0J105K	6.3V 1U	2	
C3069-71	ECJ1VB1H103K	50V 0.01U	3	
C4003,04	ECJ1VB1H103K	50V 0.01U	2	
C4005-07	F2A1H1R0A236	50V 1U	3	
C4008	F2A1C221A019	16V 220U	1	
C4010	F2A1H1R0A236	50V 1U	1	
C4012	ECJ2VB1E104K	25V 0.1U	1	
C4014	F2A1H100A236	50V 10U	1	
C4017	F2A1H100A236	50V 10U	1	
C4019	VCEA1CAE100	16V 10U	1	F2A1C1000008
C4021	VCEA1CAE100	16V 10U	1	F2A1C1000008
C4022	ECJ1XB1C104K	16V 0.1U	1	
C4023	F2A1H1R0A236	50V 1U	1	
C4024	F2A1C471A236	16V 470U	1	
C4025	F2A1H1R0A236	50V 1U	1	
C4026	ECJ1VF1C104Z	16V 0.1U	1	
C4027	F2A1H1R0A236	50V 1U	1	
C4029	F2A1C471A236	16V 470U	1	
C4030	ECJ1VF1C104Z	16V 0.1U	1	
C4031	F2A1H1R0A236	50V 1U	1	
C4033,34	F2A1C4700011	16V 47U	2	
C4039,40	ECJ1VC1H100C	50V 10P	2	
C4052	ECJ1VF1C104Z	16V 0.1U	1	
C4053	ECJ1XB1C104K	16V 0.1U	1	
C4054	F2A0J470A179	6.3V 47U	1	
C4055	ECJ1VF1C104Z	16V 0.1U	1	
C4056	F2A0J471A247	6.3V 470U	1	
C4057	ECJ2VC1H680J	50V 68P	1	
C4059	ECQV1H104JL	50V 0.1U	1	
C4060	ECJ2VC1H680J	50V 68P	1	
C4061	ECJ1VF1C104Z	16V 0.1U	1	
C4062	ECA1AM221	10V 220U	1	
C4063,64	F2A1C4700011	16V 47U	2	
C4065	ECJ1VF1C104Z	16V 0.1U	1	
C4067	F2A0J470A179	6.3V 47U	1	
C4069	ECJ1VF1C104Z	16V 0.1U	1	
C4070	ECA1AM221	10V 220U	1	
C4072	ECA1AM221	10V 220U	1	
C4074,75	ECJ1VF1C104Z	16V 0.1U	2	
C4076	F2A1C471A236	16V 470U	1	
C4077	ECJ1VF1C104Z	16V 0.1U	1	
C4082,83	ECJ2VC1H561J	50V 560P	2	
C4091	ECJ1VF1C104Z	16V 0.1U	1	
C4092	F2A1C221A019	16V 220U	1	
C7401	F2A1C471A236	16V 470U	1	
C7402	ECJ1VB1H103K	50V 0.01U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C7403	F2A0J470A179	6.3V 47U	1	
C7404	ECEA0JKS470	6.3V 47U	1	
C7405,06	ECJ1XB1C104K	16V 0.1U	2	
C7407	ECJ1VB1H103K	50V 0.01U	1	
C7408	ECJ1XB1C104K	16V 0.1U	1	
C7409	ECJ1VB1H103K	50V 0.01U	1	
C7411,12	ECJ1VB1H103K	50V 0.01U	2	
C7414	ECEA1HKS010	50V 1U	1	
C7415-17	ECEA0JKS470	6.3V 47U	3	
C7418,19	ECJ1VC1H330J	50V 33P	2	
C7420	ECJ1XB1C104K	16V 0.1U	1	
C7421,22	ECJ1VB1H103K	50V 0.01U	2	
C7423	ERJ3GEY0R00V	1/10W 0	1	
C7424	ECEA0JKS470	6.3V 47U	1	
C7425	ECJ1VC1H101J	50V 100P	1	
C7426	ECJ1XB1C104K	16V 0.1U	1	
C7427	ECJ1VB1H222K	50V 2200P	1	
C7428	ECJ2VB1H103K	50V 0.01U	1	
C7429	ECJ1XB1C104K	16V 0.1U	1	
C7431-33	ECEA0JKS470	6.3V 47U	3	
C7439	ECJ1XB1C104K	16V 0.1U	1	
C7440	ECEA0JKS470	6.3V 47U	1	
C7441	ECJ1XB1C104K	16V 0.1U	1	
C7502-04	F2A0J470A012	6.3V 47U	3	
C7507	VCE0073-T	CAPACITOR	1	F4D55473A005
C7508,09	ECJ1VC1H221J	50V 220P	2	
C7511	ECJ1VF1C104Z	16V 0.1U	1	
C7512	ECJ1VC1H470J	50V 47P	1	
C7513	ECJ1VC1H471J	50V 470P	1	
C7514	ECJ1VC1H470J	50V 47P	1	
C7515	ECJ1VC1H471J	50V 470P	1	
C7516,17	ECJ1XB1C104K	16V 0.1U	2	
C7525	ECJ1VC1H101J	50V 100P	1	
C7526	ECJ1XB1C104K	16V 0.1U	1	
C7527	F2A0J470A012	6.3V 47U	1	
C7528	ECJ1VF1C104Z	16V 0.1U	1	
C7529	F2A0J470A012	6.3V 47U	1	
C7546	ECJ1XB1C104K	16V 0.1U	1	
C7550	ECJ1VB1H103K	50V 0.01U	1	
C7551	ECA1HHG100	50V 10U	1	
C7552	ECJ1VF1H104Z	50V 0.1U	1	
C7555	F2A1E221A210	25V 220U	1	
C7556	ECA1CHG221	16V 220U	1	
C7558	ECA1VHG470	35V 47U	1	
C7559	ECQB1H223KF3	50V 0.022U	1	
C7560	ECA1HHG100	50V 10U	1	
C7562	ECJ2YB0J475K	6.3V 4.7U	1	
C7563	ECJ1VC1H101J	50V 100P	1	
C7565	ECJ2YB0J475K	6.3V 4.7U	1	
C7566,67	ECJ1XB1C104K	16V 0.1U	2	
C7568	VCEA0JBS101	6.3V 100U	1	F2A0J1010003
C7569	ECJ1VF1C104Z	16V 0.1U	1	
C7580-82	ECJ1VC1H100C	50V 10P	3	
C7583	ECJ1VC1H101J	50V 100P	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C7584,85	ECJ1VC1H180J	50V 18P	2	
C7586	ECJ1VC1H220J	50V 22P	1	
C7587	ECJ1VC1H180J	50V 18P	1	
C7588	ECJ1VB1H103K	50V 0.01U	1	
C7589	ECJ1VF1C104Z	16V 0.1U	1	
C7590	F2A0J470A012	6.3V 47U	1	
C7592,93	ECJ1VC1H100C	50V 10P	2	
C7594	F2A0J470A012	6.3V 47U	1	
C7595	ECJ1VB1H103K	50V 0.01U	1	
C7596	ECJ1VC1H470J	50V 47P	1	
C7597	ECJ1VB1H103K	50V 0.01U	1	
C7598	ECJ1VC1H470J	50V 47P	1	
C7599	ECJ1XB1C104K	16V 0.1U	1	
C7600	ECJ1VC1H470J	50V 47P	1	
C7601	ECJ1XB1C104K	16V 0.1U	1	
C7602	ECJ1VB1H103K	50V 0.01U	1	
C7603	F2A0J470A012	6.3V 47U	1	
C7604	ECJ1XB1C104K	16V 0.1U	1	
C7605,06	ECJ1VC1H100C	50V 10P	2	
C7607	ECJ1VB1H103K	50V 0.01U	1	
C7608	F2A0J470A012	6.3V 47U	1	
C7609,10	ECJ1VC1H100C	50V 10P	2	
C7611-13	ECJ1VB1H103K	50V 0.01U	3	
C7618	ECJ1XB1C104K	16V 0.1U	1	
C7620	ECJ1VB1H103K	50V 0.01U	1	
C7626	ECJ1VB1H103K	50V 0.01U	1	
C7633	VCEA0JBS101	6.3V 100U	1	F2A0J1010003
C7636	ECJ1VB0J105K	6.3V 1U	1	
C7637	ECJ1VB1H103K	50V 0.01U	1	
C7639	ECJ1VF1C104Z	16V 0.1U	1	
C7646	ECJ1VB0J105K	6.3V 1U	1	
C7650	ECJ1VB1H103K	50V 0.01U	1	
C7652	ECJ1XB1C104K	16V 0.1U	1	
D1501	MA165TA5	DIODE	1	MA2C16500E
D4001	MA165TA5	DIODE	1	MA2C16500E
D4005,06	MA3Z142D0RG	DIODE	2	
D7401	MA165TA5	DIODE	1	MA2C16500E
D7402	MA4300N-M	DIODE	1	MAZ4300NM
D7403	MA165TA5	DIODE	1	MA2C16500E
D7501	MAZ4240NMF	DIODE	1	
D7502	B0AAGM000003	DIODE	1	B0AAGM000007
D7504,05	MA2C18500E	DIODE	2	
D7506	MAZ4300NLF	DIODE	1	
D7507	1SS355	DIODE	1	B0ACCK000005
D7508	B0JDCE000002	DIODE	1	
D7512	B3AEA0000049	DIODE	1	
DP7501	A2BD00000074	FL DISPLAY TUBE	1	
DU7402	ENG47329G1Y	TV TUNERS	1	
IC1502	C0DBAHG00013	IC	1	
IC1505	C0CBCDD00008	IC	1	

10000	0000000000	0	.	
-------	------------	---	---	--

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
IC1506	C0CBCDD00002	IC	1	
IC1507	C0CBCDD00006	IC	1	
IC1508	C0DBEGD00002	IC	1	
IC1509	C0DBEFG00003	IC	1	
IC1510	C0DBEGG00003	IC	1	
IC3001	C1AB00001979	IC	1	
IC3002	C1AB00001486	IC	1	
IC3003	C9ZB00000377	IC	1	
IC4001	C1AB00001920	IC	1	
IC4005	TC7W04FTE12L	IC	1	C0JBAB000178
IC4006	K7AAAB000013	IC	1	
IC4007	TC7SET08F	IC	1	C0JBAA000284
IC4009	C0ABBB000216	IC	1	
IC4010	C0DBZJE00003	IC	1	
IC4011	C0CBCDD00002	IC	1	
IC4012	C0ABBB000118	IC	1	
IC4013	AN78L09M	IC	1	
IC7401	C0DBZJE00003	IC	1	
IC7402	C0DBCHD00002	IC	1	
IC7403	C0DBZHG00016	IC	1	
IC7501	C2CBJG000399	IC	1	
IC7502	C0HBB0000033	IC	1	
IC7503	C0EBJ0000110	IC	1	
IC7504	C3EBJC000038	IC	1	
IC7505	C0EBE0000194	IC	1	
IC7506	NJM2904M	IC	1	C0ABBA000021
IC7508	C0EBE0000218	IC	1	
IP7501	ICP-N10T104	IC PROTECTOR	1	B1ZAZ0000035 
JK3001	K1U822B00003	JACK,AV4 IN/OUT	1	
JK7501	K1U415B00001	JACK,AV3	1	
K7401	ERJ3GEY0R00V	1/10W 0	1	
K7508	ERJ3GEY0R00V	1/10W 0	1	
K7510,11	ERJ3GEY0R00V	1/10W 0	2	
K7514,15	ERJ3GEY0R00V	1/10W 0	2	
L1501	G0A220G00018	COIL 22UH	1	
L4002	ELESE220KA	COIL 22UH	1	
L7401	G0A220G00018	COIL 22UH	1	
L7403	G0C2R2JA0019	COIL 2.2UH	1	
LB1501	J0JHC0000032	COIL	1	
LB1503	J0JHC0000032	COIL	1	
LB1504,05	J0JKB0000003	COIL	2	
LB3002-04	J0JHC0000032	COIL	3	
LB3005	J0JBC0000011	COIL	1	
LB3006	J0JGC0000020	COIL	1	
LB3007	J0JBC0000011	COIL	1	
LB3008	J0JGC0000020	COIL	1	
LB4001	J0JGC0000020	COIL	1	
LB7402	J0JHC0000032	COIL	1	
LB7404-10	J0JHC0000032	COIL	7	



2017-18	0000000000	000	.	
---------	------------	-----	---	--

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
LB7501,02	ERJ3GEY0R00V	1/10W 0	2	
LB7503	J0JKB0000037	COIL	1	
LB7504	J0JGC0000020	COIL	1	
LB7506,07	J0JGC0000020	COIL	2	
LB7508	VLP0175	COIL	1	J0JCC0000060
LB7509-11	J0JGC0000020	COIL	3	
LB7512-14	J0JCC0000103	COIL	3	
LB7515,16	J0JBC0000011	COIL	2	
P1501	K1KA08A00427	CONNECTOR(8P)	1	
P1502	K1KA23A00004	CONNECTOR(23P)	1	
P7402	K1KA88A00002	CONNECTOR(88P)	1	
P7503	K1KA03A00173	CONNECTOR(3P)	1	
P7504	K1KB12B00049	CONNECTOR(12P)	1	
PP7401	VJP3042G020W	CONNECTOR(20P)	1	K1KA20A00203
PP7402	VJP3042G018W	CONNECTOR(18P)	1	K1KA18A00041
PP7403	K1KA15A00064	CONNECTOR(15P)	1	
Q3006,07	2SB1218A	TRANSISTOR	2	
Q3009,10	2SB1218A	TRANSISTOR	2	
Q4004	2SB1218A	TRANSISTOR	1	
Q4006-09	2SD132800L	TRANSISTOR	4	
Q7401	2SD1819AWL	TRANSISTOR	1	
Q7402	2SB1218A	TRANSISTOR	1	
Q7404-06	2SD0601A	TRANSISTOR	3	
Q7503	2SD1994B	TRANSISTOR	1	
Q7505	2SB0709ARL	TRANSISTOR	1	
Q7506	2SD1819AWL	TRANSISTOR	1	
Q7507	2SB0709ARL	TRANSISTOR	1	
Q7508	2SD1819AWL	TRANSISTOR	1	
Q7511	2SD0601A	TRANSISTOR	1	
Q7512	2SD0874A0L	TRANSISTOR	1	
Q7517	2SD0601A	TRANSISTOR	1	
Q7518	2SD1819AWL	TRANSISTOR	1	
Q7519	2SD0601A	TRANSISTOR	1	
QR3002,03	UN5212TX	TRANSISTOR	2	UNR521200L
QR4002-05	UN5211	TRANSISTOR	4	UNR5211
QR4012	UN5113TW	TRANSISTOR	1	
QR7401-03	UN5213TX	TRANSISTOR	3	UNR521300L
QR7404	UNR511400L	TRANSISTOR	1	
QR7405	UN5213TX	TRANSISTOR	1	UNR521300L
QR7501	UN5113TW	TRANSISTOR	1	
QR7502	UN5212TX	TRANSISTOR	1	UNR521200L
QR7503	UN5214TX	TRANSISTOR	1	UNR521400L
R1501	ERJ3GEYJ822V	1/10W 8.2K	1	D0GB822JA002
R1502	ERJ3GEYJ332V	1/10W 3.3K	1	D0GB332JA002
R1503	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R1504	ERDS2FJ271	1/4W 270	1	
R1506	ERDS2FJ271	1/4W 270	1	
R1507	ERJ3RED330	1/16W 33	1	
R1508	ERJ3RBD201	1/16W 200	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R1509	ERJ3RBD102V	1/16W 1K	1	
R1510	ERJ3RED220	1/16W 22	1	
R1511	ERJ3RBD182V	1/16W 1.8K	1	
R1512	ERJ3RBD202	1/16W 2K	1	
R1515,16	ERDS2FJ271	1/4W 270	2	
R3026	ERJ3RED150V	1/16W 15	1	
R3027,28	ERJ3RBD471V	1/16W 470	2	
R3029	ERJ3RBD104	1/16W 100K	1	
R3030	ERJ3GEYJ105V	1/10W 1M	1	
R3037	ERJ3GEYJ102V	1/10W 1K	1	
R3038	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R3044	ERJ3GEYJ330V	1/10W 33	1	D0GB330JA002
R3045,46	ERJ3GEYJ221V	1/10W 220	2	
R3047	ERJ3RBD153	1/16W 15K	1	
R3048	ERJ3RBD182V	1/16W 1.8K	1	
R3049	ERJ3RED330	1/16W 33	1	
R3050	ERJ3RBD182V	1/16W 1.8K	1	
R3051	ERJ3RED330	1/16W 33	1	
R3052,53	ERJ3GEYJ102V	1/10W 1K	2	
R3054-59	ERJ6GEYJ750V	1/8W 75	6	
R3060	ERJ3EKF75R0	1/10W 75	1	
R4001	ERJ6GEYJ102V	1/8W 1K	1	
R4002	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R4004	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R4005-07	ERJ3GEY0R00V	1/10W 0	3	
R4008,09	ERJ3GEYJ823V	1/10W 82K	2	D0GB823JA002
R4010,11	ERJ3GEYJ101	1/10W 100	2	D0GB101JA002
R4012	ERJ3GEYJ333V	1/10W 33K	1	D0GB333JA002
R4013	ERJ6GEYJ102V	1/8W 1K	1	
R4014	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R4015	ERJ6GEYJ102V	1/8W 1K	1	
R4017	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R4018	ERJ3GEY0R00V	1/10W 0	1	
R4019,20	ERJ3GEYJ473V	1/10W 47K	2	D0GB473JA002
R4021,22	ERJ3GEYJ823V	1/10W 82K	2	D0GB823JA002
R4023	ERJ6GEYJ102V	1/8W 1K	1	
R4046,47	D0HB752ZA002	1/10W 7.5K	2	
R4053	JAR0816P103D	1/16W 10K	1	D0HB103ZA002
R4055	D0HB153ZA002	1/10W 15K	1	
R4056	JAR0816P103D	1/16W 10K	1	D0HB103ZA002
R4057	D0HB153ZA002	1/10W 15K	1	
R4060,61	ERJ3GEYJ103V	1/10W 10K	2	D0GB103JA002
R4066,67	JAR0816P103D	1/16W 10K	2	D0HB103ZA002
R4070	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R4071	ERJ3GEYJ473V	1/10W 47K	1	D0GB473JA002
R4074	ERJ3GEYJ473V	1/10W 47K	1	D0GB473JA002
R4076	ERJ3GEYJ821V	1/10W 820	1	
R4077	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R4078,79	ERJ3GEYJ272V	1/10W 2.7K	2	
R4080	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R4081	ERJ3GEYJ821V	1/10W 820	1	
R4087	ERJ3GEYJ102V	1/10W 1K	1	
R4088,89	ERJ3GEYJ272V	1/10W 2.7K	2	
R4090	ERJ3GEYJ221V	1/10W 220	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R4093	ERJ3GEYJ221V	1/10W 220	1	
R4099	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7401,02	ERJ3GEYJ103V	1/10W 10K	2	D0GB103JA002
R7403	ERJ3GEYJ392V	1/10W 3.9K	1	
R7404	ERJ3GEYJ472V	1/10W 4.7K	1	
R7405	ERDS2FJ471	1/4W 470	1	
R7406	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R7407	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R7408	ERJ3GEYD153V	1/10W 15K	1	D0HB153ZA002
R7411	ERG2SJ471E	2W 470	1	
R7412	ERJ3GEYJ681V	1/10W 680	1	D0GB681JA002
R7413,14	ERJ3GEYJ271V	1/10W 270	2	
R7415,16	ERJ3GEYJ471V	1/10W 470	2	
R7417	ERG2SJ471E	2W 470	1	
R7418	ERJ3GEYJ221V	1/10W 220	1	
R7420	ERJ3GEYJ102V	1/10W 1K	1	
R7421,22	ERJ3GEYJ101	1/10W 100	2	D0GB101JA002
R7427	ERJ3GEYJ102V	1/10W 1K	1	
R7428	ERJ3GEYJ333V	1/10W 33K	1	D0GB333JA002
R7429	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R7430	ERJ3GEYJ102V	1/10W 1K	1	
R7431	ERJ3GEYJ333V	1/10W 33K	1	D0GB333JA002
R7432	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R7433	ERJ3GEYJ102V	1/10W 1K	1	
R7434	ERJ3GEYJ333V	1/10W 33K	1	D0GB333JA002
R7435	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R7438-42	ERJ3GEYJ220V	1/10W 22	5	
R7444	ERJ3GEYJ681V	1/10W 680	1	D0GB681JA002
R7505	ERJ3RBD273V	1/16W 27K	1	
R7507	ERDS2FJ331	1/4W 330	1	
R7508	ERDS2FJ5R6	1/4W 5.6	1	
R7510	ERJ3GEYJ332V	1/10W 3.3K	1	D0GB332JA002
R7513	ERJ3GEYJ473V	1/10W 47K	1	D0GB473JA002
R7514	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7516	ERJ3GEYJ102V	1/10W 1K	1	
R7517	ERJ3GEYJ104	1/10W 100K	1	
R7518	ERJ3GEYJ392V	1/10W 3.9K	1	
R7519	ERJ3GEYJ102V	1/10W 1K	1	
R7520	ERJ3GEYJ104	1/10W 100K	1	
R7521	ERJ3GEYG152	1/10W 1.5K	1	
R7522	ERJ3GEYG562V	1/10W 5.6K	1	
R7523	ERJ3GEYD153V	1/10W 15K	1	D0HB153ZA002
R7530	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R7531	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R7532	ERJ3GEYJ472V	1/10W 4.7K	1	
R7533	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R7534-37	ERJ3GEYJ101	1/10W 100	4	D0GB101JA002
R7538	ERJ3GEYJ472V	1/10W 4.7K	1	
R7539	ERJ3GEYJ104	1/10W 100K	1	
R7540	ERJ3GEYJ332V	1/10W 3.3K	1	D0GB332JA002
R7541	ERJ3GEY0R00V	1/10W 0	1	
R7542	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R7543-45	ERJ3GEYJ101	1/10W 100	3	D0GB101JA002
R7546,47	ERJ3GEYJ472V	1/10W 4.7K	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R7548	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7549	ERJ3GEYJ511	1/10W 510	1	
R7550,51	ERJ3GEYJ202V	1/10W 2K	2	
R7552	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7553	ERJ3GEYJ472V	1/10W 4.7K	1	
R7554	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7556-59	ERJ3GEYJ101	1/10W 100	4	D0GB101JA002
R7561	ERDS2TJ392	1/4W 3.9K	1	
R7562-64	ERJ3GEYJ101	1/10W 100	3	D0GB101JA002
R7567	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7569	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7571-78	ERJ3GEYJ101	1/10W 100	8	D0GB101JA002
R7579,80	ERJ3GEYJ221V	1/10W 220	2	
R7581	ERJ3GEYG393V	1/10W 39K	1	
R7582	ERJ3GEYG433	1/10W 43K	1	
R7583,84	ERJ3GEYJ473V	1/10W 47K	2	D0GB473JA002
R7585,86	ERJ3GEYJ223V	1/10W 22K	2	D0GB223JA002
R7588	ERJ3GEYJ472V	1/10W 4.7K	1	
R7589-91	ERJ3RBD822	1/10W 8.2K	3	
R7594	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R7595,96	ERJ3GEYJ473V	1/10W 47K	2	D0GB473JA002
R7597	ERJ3GEYD153V	1/10W 15K	1	D0HB153ZA002
R7598	ERJ3GEYJ181V	1/10W 180	1	
R7599	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R7600,01	ERJ3GEYJ103V	1/10W 10K	2	D0GB103JA002
R7602	ERJ3GEYJ821V	1/10W 820	1	
R7603	ERJ3GEYJ183V	1/10W 18K	1	D0GB183JA002
R7604-06	ERJ3EKF75R0	1/10W 75	3	
R7607	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R7608	ERJ3GEYJ104	1/10W 100K	1	
R7610-13	ERJ3GEYJ101	1/10W 100	4	D0GB101JA002
R7617	ERDS2FJ750	1/4W 75	1	
R7619	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7620	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R7621	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7625-30	ERJ3GEYJ101	1/10W 100	6	D0GB101JA002
R7631,32	ERJ3GEYJ102V	1/10W 1K	2	
R7633	ERJ3RBD103V	1/16W 10K	1	
R7634	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7635-37	ERJ3GEYJ103V	1/10W 10K	3	D0GB103JA002
R7638	ERJ3GEYJ472V	1/10W 4.7K	1	
R7639	ERJ3GEYJ473V	1/10W 47K	1	D0GB473JA002
R7640	ERJ3GEYJ225V	1/10W 2.2M	1	
R7641	ERJ3GEYJ273V	1/10W 27K	1	D0GB273JA002
R7642	ERJ3GEYJ224V	1/10W 220K	1	D0GB224JA002
R7643	ERJ3GEYJ104	1/10W 100K	1	
R7644	ERJ3GEYJ221V	1/10W 220	1	
R7645	ERJ3GEYJ104	1/10W 100K	1	
R7646,47	ERJ3GEYJ101	1/10W 100	2	D0GB101JA002
R7671	ERJ3GEYJ682V	1/10W 6.8K	1	D0GB682JA002
R7672	ERJ3GEYJ473V	1/10W 47K	1	D0GB473JA002
S7501	K0F111B00044	SWITCH(POWER)	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
T7501	ETS13TB119AP	TRANSFORMER	1	
W500-05	ERJ3GEY0R00V	1/10W 0	6	
W507-23	ERJ3GEY0R00V	1/10W 0	17	
W529,30	ERJ3GEY0R00V	1/10W 0	2	
W534-37	ERJ3GEY0R00V	1/10W 0	4	
W538,39	ERJ6GEY0R00V	1/8W 0	2	
W540-42	ERJ3GEY0R00V	1/10W 0	3	
X7501	H0D100500016	CRYSTAL OSCILLATOR	1	
X7502	H0A327200026	OSCILLATOR	1	
ZJ3001	VJR0978	EARTH ANGLE	1	K9ZZ00000424
ZJ7401-04	VJR0978	EARTH ANGLE	4	K9ZZ00000424
ZJ7501	VJR0978	EARTH ANGLE	1	K9ZZ00000424
	03	VEP07A71N		(VIF P.C.B.)
C0701	ECEA1HKS010	50V 1U	1	
C0702	ERJ3GEYJ102V	1/10W 1K	1	
C0703	ECEA1HKS010	50V 1U	1	
C0704	ECJ1VB1E683K	25V 0.0683U	1	
C0705	ECJ1VB1E104K	25V 0.1U	1	
C0706	ECJ2XB1H333K	50V 0.033U	1	
C0707	ECEA1HKAR47B	50V 0.47U	1	
C0709,10	ECJ1VF1H103Z	50V 0.01U	2	
C0711	ECEA1CKS220	16V 22U	1	
C0712	ECJ1VF1C104Z	16V 0.1U	1	
C0713	ECEA0JKS101	6.3V 100U	1	
C0714	ECJ2XF1C105Z	16V 1U	1	
C0717	ECJ1VC1H180J	50V 18P	1	
C0721	ECUV1H470JCG	50V 47P	1	ECJ2VC1H470J
C0724	ECJ2VF1H103Z	50V 0.01U	1	
C0725	ECJ1VC1H030C	50V 3P	1	
C0727	ECJ1VC1H390J	50V 39P	1	
C0732	ECJ1VC1H101J	50V 100P	1	
IC0701	C1AB00001924	IC	1	
K0709	ERJ3GEY0R00V	1/10W 0	1	
L0701	ELJNAR22JF	COIL 22UH	1	
L0703	ELJNA3R3JF	COIL 3.3UH	1	
LB0701	J0JBC0000041	COIL	1	
PK0701	VJR0826E009W	CONNECTOR(9P)	1	K1MR09A00028
PP0701	VJP3589E004B	CONNECTOR(4P)	1	K1KA04B00135
Q0702	2SB0709ARL	TRANSISTOR	1	
R0702	ERJ3GEYJ104	1/10W 100K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R0703	ERJ3GEYJ102V	1/10W 1K	1	
R0704	ERJ6GEYG105	1/8W 1M	1	
R0705	ERJ6GEYJ472V	1/8W 4.7K	1	
R0707	ERJ3GEYJ393V	1/10W 39K	1	D0GB393JA002
R0708	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R0709	ERJ3GEY0R00V	1/10W 0	1	
R0711	ERJ3GEYJ510	1/10W 51	1	
R0714	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R0715	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R0719	ERJ3GEYJ472V	1/10W 4.7K	1	
R0725	ERJ6GEYJ101V	1/8W 100	1	
R0726	ERJ3GEYJ332V	1/10W 3.3K	1	D0GB332JA002
R0731	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R0732	ERJ3GEY0R00V	1/10W 0	1	
R0738	ERJ3GEY0R00V	1/10W 0	1	
R0740	ERJ3GEYJ271V	1/10W 270	1	
R0741	ERJ3GEYJ221V	1/10W 220	1	
R0742	ERJ6GEYJ471V	1/8W 470	1	
R0743	ERJ6GEYJ820V	1/8W 82	1	
R0747,48	ERJ3GEYJ271V	1/10W 270	2	
VR0701	EVNCYAA03B14	V.R.	1	
W1-W3	ERJ8GEY0R00V	1/4W 0	3	
W4	ERJ6GEY0R00V	1/8W 0	1	
W5,W6	ERJ8GEY0R00V	1/4W 0	2	
W7,W8	ERJ6GEY0R00V	1/8W 0	2	
W9	ERJ8GEY0R00V	1/4W 0	1	
W10	ERJ3GEY0R00V	1/10W 0	1	
W12	ERJ3GEY0R00V	1/10W 0	1	
W13,14	ERJ8GEY0R00V	1/4W 0	2	
W16	ERJ8GEY0R00V	1/4W 0	1	
X0701	VLF1430	FILTER	1	J0B3955A0001
X0702	VLF1431	FILTER	1	J0B4055A0001
X0704	VLF1497	FILTER	1	
■	04	VEP07A51A		(NICAM DECORDER P.C.B.)
C7301	ECJ1VF1C104Z	16V 0.1U	1	
C7302	ERJ3GEY0R00V	1/10W 0	1	
C7303	ECEA0JKS101	6.3V 100U	1	
C7305	ECEA0JKS101	6.3V 100U	1	
C7306	ECJ1VF1H103Z	50V 0.01U	1	
C7307,08	ECJ1VC1H100C	50V 10P	2	
C7309-11	ECJ1VC1H101J	50V 100P	3	
C7312,13	ECEA1CKS100	16V 10U	2	
C7314	ECJ1VF1C104Z	16V 0.1U	1	
C7317	ECEA1CKA470	16V 47U	1	
C7318	ECEA1CKS100	16V 10U	1	
C7323	ECJ1VC1H102J	50V 1000P	1	
C7324	ECJ1VF1C104Z	16V 0.1U	1	
C7329	ERJ3GEY0R00V	1/10W 0	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C7330	ERJ3GEYJ822V	1/10W 8.2K	1	D0GB822JA002
C7332	ECJ1VF1C104Z	16V 0.1U	1	
C7333	ECJ1XB1C104K	16V 0.1U	1	
C7334	ECEA1HKS2R2	50V 2.2U	1	
C7335	ECJ1VF1C104Z	16V 0.1U	1	
IC7301	TDA9874AH	IC	1	C1AB00001404
IC7302	PST7043-T	IC	1	C0EAH0000051
K7301-03	ERJ3GEY0R00V	1/10W 0	3	
K7305	ERJ3GEY0R00V	1/10W 0	1	
L7303	G0C1R0JA0019	COIL 1UH	1	
LB7301,02	J0JCC0000124	COIL	2	
LB7303	J0JCC0000080	COIL	1	
PK7301	VJR0777B007W	CONNECTOR(7P)	1	K1MM07B00002
PK7302	VJR0777B006W	CONNECTOR(6P)	1	K1MM06B00002
R7301	ERJ3GEY0R00V	1/10W 0	1	
R7304	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7307	ERJ3GEY0R00V	1/10W 0	1	
R7309	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R7311	ERJ3GEYJ221V	1/10W 220	1	
R7312,13	ERJ3RBD221	1/10W 220	2	
R7314,15	ERJ3GEY0R00V	1/10W 0	2	
R7317	ERJ3GEY0R00V	1/10W 0	1	
R7319	ERJ3GEY0R00V	1/10W 0	1	
R7322	ERJ3GEY0R00V	1/10W 0	1	
R7324,25	ERJ3GEYJ101	1/10W 100	2	D0GB101JA002
W6,W7	ERJ3GEY0R00V	1/10W 0	2	
X7301	H0D245500016	CRYSTAL OSCILLATOR	1	
■	05	REP3682A		(SCART P.C.B.)
C3909	ECEA0JKS470	6.3V 47U	1	
C3910,11	ECA1CAK100XB	16V 10U	2	
C3914-17	ECA1HAK010XI	50V 1U	4	
C3918,19	ECA1CAK100XB	16V 10U	2	
C3920	ECJ1XB1C104K	16V 0.1U	1	
C3921	ECA0JAK331X	6.3V 330U	1	
C3922	ECJ1VB1H103K	50V 0.01U	1	
C3923	ECJ1XB1C104K	16V 0.1U	1	
C3924	ECA0JAK331X	6.3V 330U	1	
C3925	ECJ1VB1H103K	50V 0.01U	1	
C3928,29	ECA1HAK010XI	50V 1U	2	
C3930	ECJ1VB1H103K	50V 0.01U	1	
C3931,32	ECA1HAK010XI	50V 1U	2	
C3933	ECA1CAK101XB	16V 100U	1	
C3934	ECJ1VB1H103K	50V 0.01U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C3935	ECA1CAK101XB	16V 100U	1	
C3938	ECJ1VF1C104Z	16V 0.1U	1	
C3939	ECJ1VB1H103K	50V 0.01U	1	
C3951,52	ECJ1VC1H470J	50V 47P	2	
C3953,54	ECJ1VC1H471J	50V 470P	2	
C3955,56	ECJ1VC1H101J	50V 100P	2	
C3957,58	ECJ1VC1H471J	50V 470P	2	
C3959,60	ECJ1VC1H470J	50V 47P	2	
C3961,62	ECJ1VC1H101J	50V 100P	2	
D3901	MA165TA5	DIODE	1	MA2C16500E
D3903	MA3Z142D0RG	DIODE	1	
IC3901	C1AB00001776	IC	1	
JK3901	K2HA306A0025	JACK,VIDEO OUT	1	
JK3904,05	K1FB121A0003	JACK,AV1/2	2	
LB3907,08	J0JGC0000020	COIL	2	
LB3911-13	J0JGC0000020	COIL	3	
LB3922,23	J0JGC0000020	COIL	2	
LB3925	J0JGC0000020	COIL	1	
PS3901	VJS3042F020W	CONNECTOR(20P)	1	K1KB20B00027
PS3902	VJS3042F018W	CONNECTOR(18P)	1	K1KB18B00012
PS3903	K1KB15B00013	CONNECTOR(15P)	1	
Q3901	2SD1819AWL	TRANSISTOR	1	
Q3905	2SD132800L	TRANSISTOR	1	
Q3906	2SB710AQRSTX	TRANSISTOR	1	2SB0710AWL
Q3908	2SB1218A	TRANSISTOR	1	
Q3909,10	2SD132800L	TRANSISTOR	2	
QR3908	UN5212TX	TRANSISTOR	1	UNR521200L
QR3909	UN5211	TRANSISTOR	1	UNR5211
QR3913	UN5212TX	TRANSISTOR	1	UNR521200L
R3901-03	ERJ3RED750V	1/16W 75	3	
R3904	ERJ3GEYJ330V	1/10W 33	1	D0GB330JA002
R3905	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R3906	ERJ3GEYJ102V	1/10W 1K	1	
R3907	ERJ3GEYJ273V	1/10W 27K	1	D0GB273JA002
R3908,09	ERJ6GEYJ471V	1/8W 470	2	
R3910	ERJ3RBD151	1/16W 150	1	
R3911,12	ERJ3GEYJ222V	1/10W 2.2K	2	D0GB222JA002
R3913	ERJ3EKF1800	1/16W 180	1	
R3914	ERJ3RBD151	1/16W 150	1	
R3915	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R3916	ERJ3GEYD153V	1/10W 15K	1	D0HB153ZA002
R3917	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R3919	ERJ3RBD151	1/16W 150	1	
R3921	ERJ6ENF75R0	1/8W 75	1	
R3922,23	ERJ6GEYJ471V	1/8W 470	2	
R3924	ERDS2FJ471	1/4W 470	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R3925-28	ERJ6ENF75R0	1/8W 75	4	
R3929,30	ERJ6GEYJ471V	1/8W 470	2	
R3931-33	ERJ3RED750V	1/16W 75	3	
R3934,35	ERJ6ENF75R0	1/8W 75	2	
R3962	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R3967	ERJ3GEYJ152V	1/10W 1.5K	1	
R3968	ERJ3GEYJ680	1/10W 68	1	ERJ3GEYJ680V
R3969	ERJ3GEYJ332V	1/10W 3.3K	1	D0GB332JA002
R3972,73	ERJ3GEYJ103V	1/10W 10K	2	D0GB103JA002
R3975,76	ERJ3GEYJ101	1/10W 100	2	D0GB101JA002
R3977,78	ERJ3GEYJ103V	1/10W 10K	2	D0GB103JA002
R3979,80	ERJ6GEYJ471V	1/8W 470	2	
R3981,82	ERJ3GEYJ821V	1/10W 820	2	
R3983,84	ERJ3GEYJ104	1/10W 100K	2	
R3985	ERJ3RBD472V	1/16W 4.7K	1	
R3986	ERJ3RBD122V	1/16W 1.2K	1	
R3987	ERJ3GEYJ473V	1/10W 47K	1	D0GB473JA002
R3988,89	ERJ3GEYJ102V	1/10W 1K	2	
R3990,91	ERJ3GEYJ473V	1/10W 47K	2	D0GB473JA002
R3992,93	ERJ3GEYJ102V	1/10W 1K	2	
R3994	ERJ3GEYJ473V	1/10W 47K	1	D0GB473JA002
ZA3901-04	VMC1450	EARTH PLATE	4	
■	06	RFKBE85HGN/GCS/EE/EP		(DIGITAL P.C.B.)
C3401	ECJ1VB0J105K	6.3V 1U	1	
C3402	ECJ0EC1H220J	50V 22P	1	
C3403	ECJ0EB1A104K	10V 0.1U	1	
C3404,05	ECJ0EC1H220J	50V 22P	2	
C3406	ECJ0EB1A104K	10V 0.1U	1	
C3407,08	ECJ0EC1H100D	50V 10P	2	
C3410	ECJ0EB1C103K	16V 0.01U	1	
C3411	ECST0JX476R	6.3V 47U	1	
C3413	ECJ0EB1A104K	10V 0.1U	1	
C3417-19	ECJ1VB0J105K	6.3V 1U	3	
C3420	ECJ0EB1C103K	16V 0.01U	1	
C3421	ECJ0EB1A104K	10V 0.1U	1	
C3422	ECJ0EB1C103K	16V 0.01U	1	
C3423-28	ECJ0EB1A104K	10V 0.1U	6	
C3429,30	ECJ2FB0J106K	6.3V 10U	2	
C3431	ECJ0EB1A104K	10V 0.1U	1	
C3432	ECJ1VB0J105K	6.3V 1U	1	
C3433	ECJ0EB1A104K	10V 0.1U	1	
C3435,36	ECJ0EB1A104K	10V 0.1U	2	
C3440	EEH0B0J101P	6.3V 100P	1	
C3441	ECJ0EB1A104K	10V 0.1U	1	
C3502	ECJ0EB1C103K	16V 0.01U	1	
C4411	ECST1AY106R	10V 10U	1	
C4412	EEH0B0J470R	6.3V 47P	1	
C4413	EEH0B0J101P	6.3V 100P	1	
C4414,15	ECJ0EF1C104Z	16V 0.1U	2	
C4416	F2H0J331A016	6.3V 330U	1	








Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C4417	ECJ0EF1C104Z	16V 0.1U	1	
C4418	EEEHB0J101P	6.3V 100P	1	
C4421-26	ECJ0EB1E102K	25V 1000P	6	
C4427	EEEHB0J470R	6.3V 47P	1	
C4428	ECJ0EF1C104Z	16V 0.1U	1	
C4429	ECJ0EB1A104K	10V 0.1U	1	
C4430	ECST1AY106R	10V 10U	1	
C4431,32	ECJ0EF1C104Z	16V 0.1U	2	
C4433	EEEHB1C100R	16V 10P	1	
C4434	ECJ0EF1C104Z	16V 0.1U	1	
C6001	ECJ0EF1C104Z	16V 0.1U	1	
C6002	ECJ2FB0J106K	6.3V 10U	1	
C6003	ECJ0EB1C103K	16V 0.01U	1	
C9001,02	ECJ0EC1H470J	50V 47P	2	
C50001	ECJ1VB0J105K	6.3V 1U	1	
C50002	ECJ3YB0J226M	6.3V 22U	1	
C50004,05	ECJ0EB1A104K	10V 0.1U	2	
D3401,02	MA3S132E0L	DIODE	2	
D4401	MA3Z142K0LG	DIODE	1	
FL3401,02	F1H0J4740004	FILTER	2	
FL3404	F1H0J4740004	FILTER	1	
FL3406,07	F1H0J4740004	FILTER	2	
FL3409-12	F1H0J4740004	FILTER	4	
FL3414-26	F1H0J4740004	FILTER	13	
FL3429	F1H0J4740004	FILTER	1	
FL3431	F1H0J4740004	FILTER	1	
FL3433-35	F1H0J4740004	FILTER	3	
FL3501,02	F1H0J4740004	FILTER	2	
FL3505-16	F1H0J4740004	FILTER	12	
FL4403-05	F1H0J4740004	FILTER	3	
FL6001-18	F1H0J4740004	FILTER	18	
FL6020-23	F1H0J4740004	FILTER	4	
FL6701-03	F1H0J4740004	FILTER	3	
FL50001-06	F1H0J4740004	FILTER	6	
FP3501	K1MN40A00022	CONNECTOR(40P)	1	
IC3401	AN13310B-VB	IC	1	
IC3402	C3ABMG000092	IC	1	
IC3404	MN85573R	IC	1	
IC3406	C1DB00001110	IC	1	
IC3408	C3ABPJ000052	IC	1	
IC3409	C0DBZGC00066	IC	1	
IC3501	MN88302R	IC	1	
IC3502	C3ABRG000036	IC	1	
IC4404	C0FBBK000035	IC	1	
IC4405	C0ABBB000105	IC	1	
IC4406	C0FBAK000008	IC	1	
IC4407	C0JBAA000257	IC	1	
IC4408	C0JBAD000107	IC	1	
IC4409	C0CBCBD00002	IC	1	
IC6001	MN2DS0011-HR	IC	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
IC6002	C0EBE0000130	IC	1	
IC6003	C3CBLD000091	IC	1	
IC6004	74LVC244APWL	IC	1	C0JBAZ001466
IC6005,06	C3ABRG000036	IC	2	
IC6701	C1ZBZ0002433	IC	1	
IC6703	RFKBE85HEE	DIGITAL P.C.B.	1	(EE)
IC6703	RFKBE85HGCS	DIGITAL P.C.B.	1	(GCS)
IC6703	RFKBE85HGN	DIGITAL P.C.B.	1	(GN)
IC50001,02	C3ABPG000067	IC	2	
LB3404,05	J0JHC0000032	COIL	2	
LB3408,09	J0JHC0000032	COIL	2	
LB4401-04	J0JGC0000020	COIL	4	
LB4405	J0JHC0000032	COIL	1	
LB6001-04	J0JHC0000032	COIL	4	
LB9001,02	J0JHC0000032	COIL	2	
LB9006,07	J0JCC0000103	COIL	2	
LB9008	J0JHC0000045	COIL	1	
LB9009	J0JHC0000046	COIL	1	
LB50001-05	J0JHC0000032	COIL	5	
P6002	K1KA06A00394	CONNECTOR(6P)	1	
P9001	K1KB88A00002	CONNECTOR(88P)	1	
Q6001,02	B1ABCF000114	TRANSISTOR	2	
Q6701-05	B1ABCF000114	TRANSISTOR	5	
Q50001-05	B1ADCF000081	TRANSISTOR	5	
QR3502,03	UN5213TX	TRANSISTOR	2	UNR521300L
R3405	ERJ2GEJ103	1/16W 10K	1	
R3407	ERJ2GE0R00X	1/16W 0	1	
R3409	ERJ2GE0R00X	1/16W 0	1	
R3410,11	ERJ2GEJ101	1/16W 100	2	
R3412	ERJ2GEJ220X	1/16W 22	1	ERJ2RMJ220X
R3414	ERJ2GEJ330X	1/16W 33	1	
R3416	ERJ2GEJ472X	1/16W 4.7K	1	ERJ2RMJ472X
R3417,18	ERJ2GEJ103	1/16W 10K	2	
R3419-23	ERJ2GEJ220X	1/16W 22	5	ERJ2RMJ220X
R3427	ERJ2GEJ220X	1/16W 22	1	ERJ2RMJ220X
R3430	ERJ2GEJ220X	1/16W 22	1	ERJ2RMJ220X
R3432-34	ERJ2GEJ220X	1/16W 22	3	ERJ2RMJ220X
R3436	ERJ2GEJ470	1/16W 47	1	
R3438	ERJ2GEJ220X	1/16W 22	1	ERJ2RMJ220X
R3440	ERJ2GEJ103	1/16W 10K	1	
R3442	ERJ2GEJ103	1/16W 10K	1	
R3443-45	ERJ2GE0R00X	1/16W 0	3	
R3447	ERJ2RHD682	1/16W 6.8K	1	
R3448	ERJ2GEJ562X	1/16W 5.6K	1	
R3449	ERJ2RHD682	1/16W 6.8K	1	
R3450	ERJ2GEJ104	1/16W 100K	1	
R3451	ERJ2GEJ220X	1/16W 22	1	ERJ2RMJ220X
R3452	ERJ2GE0R00X	1/16W 0	1	
R3453	ERJ2GEJ220X	1/16W 22	1	ERJ2RMJ220X










Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R3454	ERJ2GEJ390X	1/16W 39	1	ERJ2RMJ390X
R3455	ERJ2GEJ220X	1/16W 22	1	ERJ2RMJ220X
R3456	ERJ2GEJ470	1/16W 47	1	
R3457	ERJ2GE0R00X	1/16W 0	1	
R3458	ERJ2GEJ220X	1/16W 22	1	ERJ2RMJ220X
R3460-62	ERJ2GEJ470	1/16W 47	3	
R3463,64	ERJ2GE0R00X	1/16W 0	2	
R3472,73	ERJ2GEJ220X	1/16W 22	2	ERJ2RMJ220X
R3476	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R3501-03	ERJ2GEJ220X	1/16W 22	3	ERJ2RMJ220X
R3509	ERJ2GEJ330X	1/16W 33	1	
R3510,11	ERJ2GEJ103	1/16W 10K	2	
R3514	ERJ2GEJ105	1/16W 1M	1	
R3519-22	ERJ2GEJ330X	1/16W 33	4	
R3523	ERJ2GEJ103	1/16W 10K	1	
R3524	ERJ2GEJ330X	1/16W 33	1	
R3525	ERJ2GEJ103	1/16W 10K	1	
R3526-28	ERJ2GEJ220X	1/16W 22	3	ERJ2RMJ220X
R3530	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R3531	ERJ2GEJ820X	1/16W 82	1	
R3532	ERJ2GEJ472X	1/16W 4.7K	1	ERJ2RMJ472X
R3533	ERJ2GEJ101	1/16W 100	1	
R3535	ERJ2GEJ820X	1/16W 82	1	
R3537	ERJ2GEJ562X	1/16W 5.6K	1	
R3541,42	ERJ2GEJ103	1/16W 10K	2	
R3543	ERJ2GE0R00X	1/16W 0	1	
R3548	ERJ2GEJ330X	1/16W 33	1	
R4418-27	ERJ2GE0R00X	1/16W 0	10	
R4429	JAR0816P562D	1/16W 5.6K	1	D0HB562ZA002
R4430,31	JAR0816P103D	1/16W 10K	2	D0HB103ZA002
R4432	JAR0816P562D	1/16W 5.6K	1	D0HB562ZA002
R4434,35	ERJ3GEY0R00V	1/10W 0	2	
R4436	ERJ2GEJ221	1/16W 220	1	
R4437-39	ERJ2GE0R00X	1/16W 0	3	
R4450-52	ERJ2GE0R00X	1/16W 0	3	
R4453	ERJ2GEJ562X	1/16W 5.6K	1	
R4454-57	ERJ2GE0R00X	1/16W 0	4	
R6001	ERJ2GEJ333X	1/16W 33K	1	ERJ2RMJ333X
R6002	ERJ2GEJ332X	1/16W 3.3K	1	ERJ2RMJ332X
R6003	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R6004	ERJ2GEJ472X	1/16W 4.7K	1	ERJ2RMJ472X
R6005	ERJ2GEJ103	1/16W 10K	1	
R6006	ERJ2GEJ153	1/16W 15K	1	
R6007	ERJ2GEJ472X	1/16W 4.7K	1	ERJ2RMJ472X
R6008	ERJ2GEJ103	1/16W 10K	1	
R6009,10	ERJ2GEJ330X	1/16W 33	2	
R6011	ERJ2GEJ332X	1/16W 3.3K	1	ERJ2RMJ332X
R6013	ERJ2GEJ103	1/16W 10K	1	
R6014-17	ERJ2GEJ104	1/16W 100K	4	
R6018,19	ERJ2GEJ220X	1/16W 22	2	ERJ2RMJ220X
R6020	ERJ2GE0R00X	1/16W 0	1	
R6021,22	ERJ2GEJ470	1/16W 47	2	
R6023	ERJ2GEJ332X	1/16W 3.3K	1	ERJ2RMJ332X
R6024	ERJ2GEJ103	1/16W 10K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R6027	ERJ2GE0R00X	1/16W 0	1	
R6028	ERJ2GEJ470	1/16W 47	1	
R6029	ERJ2GEJ103	1/16W 10K	1	
R6031	ERJ2GEJ470	1/16W 47	1	
R6035	ERJ2GEJ470	1/16W 47	1	
R6036	ERJ2GEJ332X	1/16W 3.3K	1	ERJ2RMJ332X
R6037	ERJ2GEJ333X	1/16W 33K	1	ERJ2RMJ333X
R6039	ERJ2GEJ103	1/16W 10K	1	
R6040	ERJ2GEJ332X	1/16W 3.3K	1	ERJ2RMJ332X
R6701	ERJ2GEJ104	1/16W 100K	1	
R6703	ERJ2GEJ103	1/16W 10K	1	
R6706,07	ERJ2GEJ470	1/16W 47	2	
R6709,10	ERJ2GEJ332X	1/16W 3.3K	2	ERJ2RMJ332X
R6711,12	ERJ2GEJ470	1/16W 47	2	
R6713	ERJ2GEJ103	1/16W 10K	1	
R6714	ERJ2GEJ333X	1/16W 33K	1	ERJ2RMJ333X
R6715	ERJ2GEJ470	1/16W 47	1	
R6716,17	ERJ2GEJ333X	1/16W 33K	2	ERJ2RMJ333X
R6718	ERJ2GE0R00X	1/16W 0	1	
R6720-28	ERJ2GEJ470	1/16W 47	9	
R6729	ERJ2GEJ104	1/16W 100K	1	
R6730	ERJ2GEJ103	1/16W 10K	1	
R6731	ERJ2GEJ222X	1/16W 22K	1	ERJ2RMJ222X
R6733	ERJ2GEJ103	1/16W 10K	1	
R6735	ERJ2GEJ472X	1/16W 4.7K	1	ERJ2RMJ472X
R6737,38	ERJ2GEJ470	1/16W 47	2	
R6739	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R6750,51	ERJ2GEJ470	1/16W 47	2	
R6752	ERJ2GEJ101	1/16W 100	1	
R6753-56	ERJ2GEJ470	1/16W 47	4	
R50001	ERJ2GEJ390X	1/16W 39	1	ERJ2RMJ390X
R50002	ERJ2GE0R00X	1/16W 0	1	
R50003	ERJ2GEJ390X	1/16W 39	1	ERJ2RMJ390X
R50004	ERJ2GE0R00X	1/16W 0	1	
R50005	ERJ2GEJ330X	1/16W 33	1	
R50006,07	ERJ2GEJ470	1/16W 47	2	
R50008	ERJ2GEJ100	1/16W 10	1	
R50009	ERJ2GEJ103	1/16W 10K	1	
R50010	ERJ2RHD242	1/16W 2.4K	1	
R50011	ERJ2RHD223X	1/16W 22K	1	
R50012,13	ERJ2GE0R00X	1/16W 0	2	
R50015	ERJ2RHD333	1/16W 33K	1	
R50016	ERJ2RHD152	1/16W 1.5K	1	
R50017	ERJ2RHD153	1/16W 15K	1	
R50018	ERJ3RBD151	1/16W 150	1	
R50019	ERJ2GEJ330X	1/16W 33	1	
R50020	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R50021	ERJ3RED820	1/16W 82	1	
R50022	ERJ2GEJ330X	1/16W 33	1	
R50023	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R50024	ERJ3RED820	1/16W 82	1	
R50025	ERJ2GEJ330X	1/16W 33	1	
R50026	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R50027	ERJ3RBD151	1/16W 150	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R50028	ERJ2GEJ330X	1/16W 33	1	
R50029	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R50030	ERJ3RED220	1/16W 22	1	
R50031	ERJ3RBD151	1/16W 150	1	
R50032	ERJ2GEJ330X	1/16W 33	1	
R50033	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R50034,35	ERJ3RED160V	1/16W 16	2	
R50036-38	ERJ2GEJ470	1/16W 47	3	
R50039	ERJ2GEJ820X	1/16W 82	1	
RX3401-17	D1H82204A024	RESISTOR-RESISTOR	17	
RX3421,22	D1H82204A024	RESISTOR-RESISTOR	2	
RX3433-44	D1H82204A024	RESISTOR-RESISTOR	12	
RX3501-04	D1H82204A024	RESISTOR-RESISTOR	4	
RX3505-08	D1H83304A024	RESISTOR-RESISTOR	4	
RX3515-19	D1H83304A024	RESISTOR-RESISTOR	5	
RX3520-26	D1H82204A024	RESISTOR-RESISTOR	7	
RX3527-32	D1H81034A024	RESISTOR-RESISTOR	6	
RX3538-40	D1H84734A024	RESISTOR-RESISTOR	3	
RX6001	D1H81034A024	RESISTOR-RESISTOR	1	
RX6002-04	D1H84704A024	RESISTOR-RESISTOR	3	
RX6005,06	D1H83304A024	RESISTOR-RESISTOR	2	
RX6007	D1H84704A024	RESISTOR-RESISTOR	1	
RX6009-26	D1H83304A024	RESISTOR-RESISTOR	18	
RX6027-32	D1H84704A024	RESISTOR-RESISTOR	6	
RX6033,34	D1H83324A013	RESISTOR-RESISTOR	2	
RX6035,36	D1H83334A024	RESISTOR-RESISTOR	2	
RX6037	D1H81034A024	RESISTOR-RESISTOR	1	
RX6038	D1H83304A024	RESISTOR-RESISTOR	1	
RX6039-42	D1H84704A024	RESISTOR-RESISTOR	4	
RX6043	D1H81034A024	RESISTOR-RESISTOR	1	
RX6044	D1H83334A024	RESISTOR-RESISTOR	1	
RX6701,02	D1H81034A024	RESISTOR-RESISTOR	2	
RX6703-06	D1H84704A024	RESISTOR-RESISTOR	4	
RX6708	D1H84704A024	RESISTOR-RESISTOR	1	
RX6711-13	D1H83324A013	RESISTOR-RESISTOR	3	
RX6716	D1H84704A024	RESISTOR-RESISTOR	1	
RX6717-19	D1H83334A024	RESISTOR-RESISTOR	3	
RX6720-23	D1H83324A013	RESISTOR-RESISTOR	4	
RX6724	D1H84704A024	RESISTOR-RESISTOR	1	
RX6726-28	D1H84704A024	RESISTOR-RESISTOR	3	
RX6729,30	D1H81034A024	RESISTOR-RESISTOR	2	
RX6731-34	D1H84704A024	RESISTOR-RESISTOR	4	
RX6735	D1H82224A024	RESISTOR-RESISTOR	1	
RX6736	D1H81034A024	RESISTOR-RESISTOR	1	
RX6737	D1H84724A024	RESISTOR-RESISTOR	1	
RX6738	D1H83334A024	RESISTOR-RESISTOR	1	
RX50001-16	D1H84704A024	RESISTOR-RESISTOR	16	
X3401	H0J270500069	CRYSTAL OSCILLATOR	1	
X3501	H2D330500001	CRYSTAL OSCILLATOR	1	
■	07	ETXMM507E4F		(POWER SUPPLY P.C.B.)

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C001	ECKENA102ME	1000P	1	
C002	ECQU2A104ML	0.1U	1	
C003	ECQU2A334ML	0.33	1	
C006	ECKENA102ME	1000P	1	
C008	KH102M	1000P	1	
C009	KMM2W470JZ	450V 47	1	
C010	RR3DD331K	2KV 330P	1	
C011	ECKENA102ME	1000P	1	
C012	MBC471J5	50V 470P	1	
C013	KY1H220	50V 22	1	
C014	MBB224K2	25V 0.22	1	
C015	MBB224K5	25V 0.22	1	
C101	KBR221K2E	250V 220P	1	
C102	ECJ2XB1H102K	50V 1000P	1	ECJ2VB1H102K
C103	KBR221K2E	250V 220P	1	
C104	ECJ2XB1H102K	50V 1000P	1	ECJ2VB1H102K
C105	KY1E471	25V 470	1	
C106	KY1A222	10V 2200	1	
C107	MBC102J5	50V 1000P	1	
C109	MBB104K2	25V 0.1U	1	
C110	MBB683K5	55V 0.068	1	
C111	MBB105K1	16V 1U	1	
C112	KY1A471	10V 470U	1	
C113	MBB105K1	16V 1U	1	
C115	MBB224K5	25V 0.22	1	
C117	KY1E221	25V 220U	1	
C118	KMG1H100	50V 10	1	
C119	ECA1AHG102	10V 1000U	1	
C120	KY1E681L	25V 680	1	
C122	MBB104K2	25V 0.1U	1	
C123	KY1C471	16V 470		
C124	KY1E221	25V 220U	1	
C125	ECA1AHG102	10V 1000U	1	
C127	ECJ2XB1H333K	50V 0.033U	1	
C128	KY1A471	10V 470U	1	
C129	MBB105K1	16V 1U	1	
C130	MBC102J5	50V 1000P	1	
C131	MBB105K1	16V 1U	1	
C141	MBB104K2	25V 0.1U	1	
C142	MBB105K1	16V 1U	1	
D001-04	GPP20J	DIODE	4	
D005	ST3D200	CLAMPER	1	
D006	AL01Z	DIODE	1	B0HAMM000077
D007	MA2J72800L	DIODE	1	MA2J728
D101	RK49	DIODE	1	B0JAPK000005
D102	FCQ20A6	DIODE	1	
D103	BRF1560	DIODE	1	
D104-07	MA165TA5	DIODE	4	MA2C16500E
D108	FCH05A10	DIODE	1	
D111-13	MA165TA5	DIODE	3	MA2C16500E

DATE	INITIALS	TIME	9	INITIALS
------	----------	------	---	----------

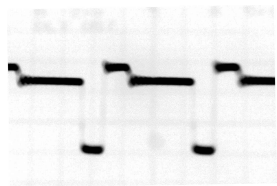
Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
D114	GPP20J	DIODE	1	
D120	MA2J11100L	DIODE	1	
F001	19181-2A	FUSE	1	
F101	SBM40	FUSE	1	
F102	SBM32	FUSE	1	
F103	SBM25	FUSE	1	
IC001	STRG6353	IC	1	
IC101	TL431AI	IC	1	
IC102	LM2904DR	IC	1	
IC103	SI3010KM	IC	1	
IC105	BD4746G	IC	1	
IC106	SI3120J	IC	1	
IP101	ICPN10	IC PROTECTOR	1	
L002	ELF15N005A	COIL	1	
L004	ELESN150KA	COIL	1	
L005	EXCELSA35	COIL	1	
L010,11	EXCELSA35	COIL	2	
L101	EXCELD35	COIL	1	
L102	LHLZ1R5M	COIL	1	
L103	EXCELD35	COIL	1	
L104	LHLZ6R8M	COIL	1	
L105	EXCELSA35	COIL	1	
L106	LH8TB100K	COIL	1	
L107	EXCELSA35	COIL	1	
L108	EXCELD35	COIL	1	
L109	LHLZ4R7M	COIL	1	
P001	K2AA2H000007	AC INLET	1	
PC001	PS2571L1	PHOTO COUPLER	1	
PS101	B4B-EH-A	CONNECTOR(4P)	1	
PS102	TWGP23XA1	CONNECTOR(23P)	1	
Q101	2SD602A-R	TRANSISTOR	1	2SD0602AR
Q102	2SB710AQRSTX	TRANSISTOR	1	2SB0710AWL
Q103	2SB0709ARL	TRANSISTOR	1	
Q104	2SD601A-R	TRANSISTOR	1	2SD0601AR
Q105	2SK3366	TRANSISTOR	1	
Q106,07	2SD601A-R	TRANSISTOR	2	2SD0601AR
Q110	2SB710AQRSTX	TRANSISTOR	1	2SB0710AWL
Q111	2SD601A-R	TRANSISTOR	1	2SD0601AR
Q113	2SK3366	TRANSISTOR	1	
Q114	2SB710AQRSTX	TRANSISTOR	1	2SB0710AWL
Q115,16	2SD601A-R	TRANSISTOR	2	2SD0601AR
Q117	2SB0709ARL	TRANSISTOR	1	
Q118	2SD602A-R	TRANSISTOR	1	2SD0602AR

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
Q119	2SB710AQRSTX	TRANSISTOR	1	2SB0710AWL
R001	ERDS1FJ105	0.5W 1M	1	
R002	CR10J681	0.1W 680	1	
R003	ERX1SZGR47	1W 0.47	1	
R005	ERDS2FJ224	1/4W 220K	1	
R006	ER0S2TKF2373	0.25W 237K	1	
R007	CR10F1272	0.1W 12.7K	1	
R008	CR10J562	0.1W 5.6K	1	
R009	ERDS2FJ224	1/4W 220K	1	
R010	ER0S2TKF2373	0.25W 237K	1	
R101	CR10J472	0.1W 4.7K	1	
R102,03	CR10J100	0.1W 10	2	
R104	CR10J471	0.1W 470	1	
R105	CR10J472	0.1W 4.7K	1	
R106	ERJ6GEYJ101V	1/8W 100	1	
R107	CR10J224	0.1W 220K	1	
R108	CR10J472	0.1W 4.7K	1	
R109	CR10J222	0.1W 2.2K	1	
R110	CR10J103	0.1W 10K	1	
R111	CR10J752	0.1W 7.5K	1	
R112	CR10J102	0.1W 1K	1	
R113	CR10J471	0.1W 470	1	
R114	ERJ6GEYJ101V	1/8W 100	1	
R115	CR10J332	0.1W 3.3K	1	
R116	CR10J102	0.1W 1K	1	
R117	ERJ6GEYJ101V	1/8W 100	1	
R120	CR10F2210	0.1W 221	1	
R121	CR10F1001	0.1W 1K	1	
R122	CR10J183	0.1W 18K	1	
R124	CR10F1470	0.1W 147	1	
R125	CR10J103	0.1W 10K	1	
R126	CR10F1002	0.1W 10K	1	
R127	CR10F3321	0.1W 3.32K	1	
R128	CR10F1211	0.1W 1.21K	1	
R130	CR10J822	0.1W 8.2K	1	
R131	CR10J103	0.1W 10K	1	
R132	CR10J472	0.1W 4.7K	1	
R136,37	CR10J152	0.1W 1.5K	2	
R139	CR10J123	0.1W 12K	1	
R143	ERDS2FJ822	1/4W 8.2K	1	
R144	CR10J222	0.1W 2.2K	1	
R145	CR10F6980	0.1W 698	1	
R153	CR10F1002	0.1W 10K	1	
R154	CR10F3321	0.1W 3.32K	1	
R157	CR10F2210	0.1W 221	1	
R158	CR10J682	0.1W 6.8K	1	
R159	CR10J103	0.1W 10K	1	
R160	CR10J332	0.1W 3.3K	1	
R163	CR10J183	0.1W 18K	1	
R164	CR10J222	0.1W 2.2K	1	
R165,66	CR10J103	0.1W 10K	2	
R167,68	CR10J152	0.1W 1.5K	2	
R169	CR10J102	0.1W 1K	1	

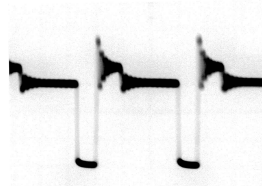
Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R170	CR10J752	0.1W 7.5K	1	
R171	CR10J472	0.1W 4.7K	1	
R172	ERJ6GEYJ101V	1/8W 100	1	
R173	CR10J224	0.1W 220K	1	
R174	CR10J471	0.1W 470	1	
R175	CR10J472	0.1W 4.7K	1	
R176	CR10F1002	0.1W 10K	1	
R177	CR10F2432	0.1W 24.3K	1	
R178	CR10J472	0.1W 4.7K	1	
R179	CR10J223	0.1W 22K	1	
R195	CR10J103	0.1W 10K	1	
T001	ETB28BF1U6A	TRANSFORMER	1	
VR101	ER0S2TKF1580	0.25W 158	1	
Z001	ERZVGAD471	VARISTOR	1	
ZD002	MA4068N	DIODE	1	
ZD004	MA8051	DIODE	1	
ZD101	MA4039M	DIODE	1	MAZ40390M
ZD102	MAZ8051	DIODE	1	
ZD103	MA8051	DIODE	1	
ZD104	MA8082	DIODE	1	
ZD105	MAZ8051	DIODE	1	
ZD106	MA8051	DIODE	1	
ZD107	RD6.2ESB	DIODE	1	
	08	REP3713B		(FRONT(R) P.C.B.)
C7801	ECJ1VF1A105Z	10V 1U	1	
D7801	SLR-325MG	LED	1	B3ABA0000109
D7804,05	SLR-325MG	LED	2	B3ABA0000109
D7806	B3ACA0000252	LED	1	
IR7801	B3RAD0000071	REMOTE SENSOR	1	
K7801,02	ERJ3GEY0R00V	1/10W 0	2	
P7801	K1KA12B00136	CONNECTOR(12P)	1	
QR7801	UN2214	TRANSISTOR	1	UNR2214
QR7804-06	UN2214	TRANSISTOR	3	UNR2214
R7801	ERDS2FJ330	1/4W 33	1	
R7802	ERJ3GEYJ221V	1/10W 220	1	
R7805,06	ERJ3GEYJ221V	1/10W 220	2	
R7807	ERJ3GEYJ391V	1/10W 390	1	
R7809	ERJ3RBD272	1/16W 2.7K	1	
R7817	ERJ3RBD272	1/16W 2.7K	1	
R7818	ERJ3RBD222V	1/16W 2.2K	1	
R7819	ERA3YED332	1/16W 3.3K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R7825	ERJ3RBD272	1/16W 2.7K	1	
R7826	ERJ3RBD222V	1/16W 2.2K	1	
R7827	ERA3YED332	1/16W 3.3K	1	
R7828	ERJ3RBD562V	1/16W 5.6K	1	
S7801	EVQ11G07K	SWITCH(OPEN/CLOSE)	1	
S7802	EVQ11G07K	SWITCH(SKIP-F)	1	
S7809	EVQ11G07K	SWITCH(CH-DOWN)	1	
S7811	EVQ11G07K	SWITCH(REC)	1	
S7812	EVQ11G07K	SWITCH(STOP)	1	
S7813	EVQ11G07K	SWITCH(SKIP-R)	1	
S7819	EVQ11G07K	SWITCH(CH-UP)	1	
S7820	EVQ11G07K	SWITCH(TIME-SLIP)	1	
S7821	EVQ11G07K	SWITCH(PLAY)	1	
S7822	EVQ11G07K	SWITCH(DRIVE SELECT)	1	

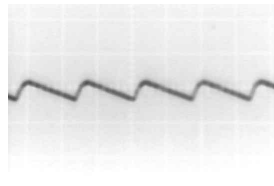
21. Schematic Diagram for printing with A4



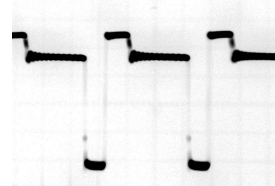
T001-B1 STOP
60Vp-p ($5\mu\text{sec.div}$)



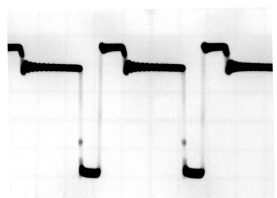
T001-P1 STOP
500Vp-p ($5\mu\text{sec.div}$)



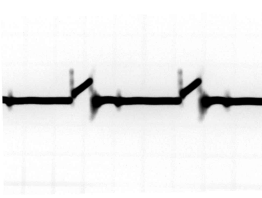
T001-P2 STOP
20Vp-p (5m sec.div)



T001-S3 STOP
50Vp-p ($5\mu\text{sec.div}$)



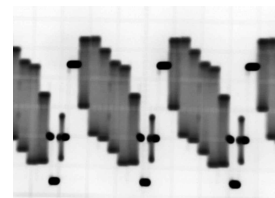
T001-S2,S4 STOP
24Vp-p ($5\mu\text{sec.div}$)



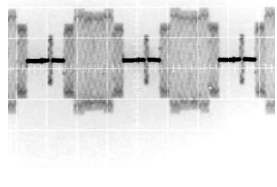
IC001-2 STOP
1.0Vp-p ($5\mu\text{sec.div}$)



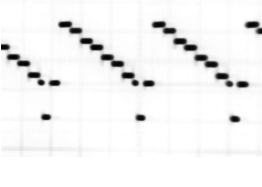
IC001-4 STOP
1.0Vp-p ($5\mu\text{sec.div}$)



P7402-2 REC/PLAY
1.0Vp-p ($20\mu\text{sec.div}$)



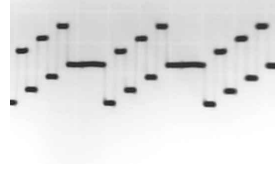
P7402-18 REC/PLAY
0.8Vp-p ($20\mu\text{sec.div}$)



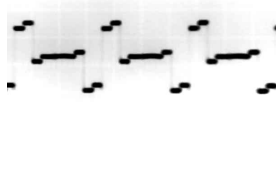
P7402-22 REC/PLAY
1.0Vp-p ($20\mu\text{sec.div}$)



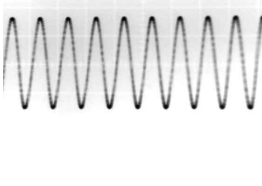
P7402-26 REC/PLAY
1.0Vp-p ($20\mu\text{sec.div}$)



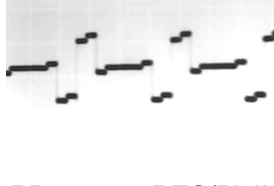
P7402-30 REC/PLAY
0.6Vp-p ($20\mu\text{sec.div}$)



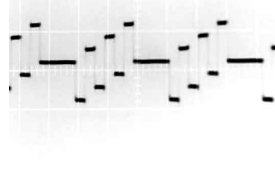
P7402-34 REC/PLAY
0.6Vp-p ($20\mu\text{sec.div}$)



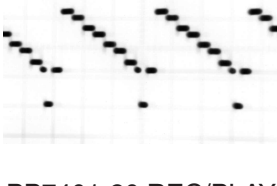
P7402-48,50 REC/PLAY
0.8Vp-p (1m sec.div)



PP7401-16 REC/PLAY
1.2Vp-p ($20\mu\text{sec.div}$)



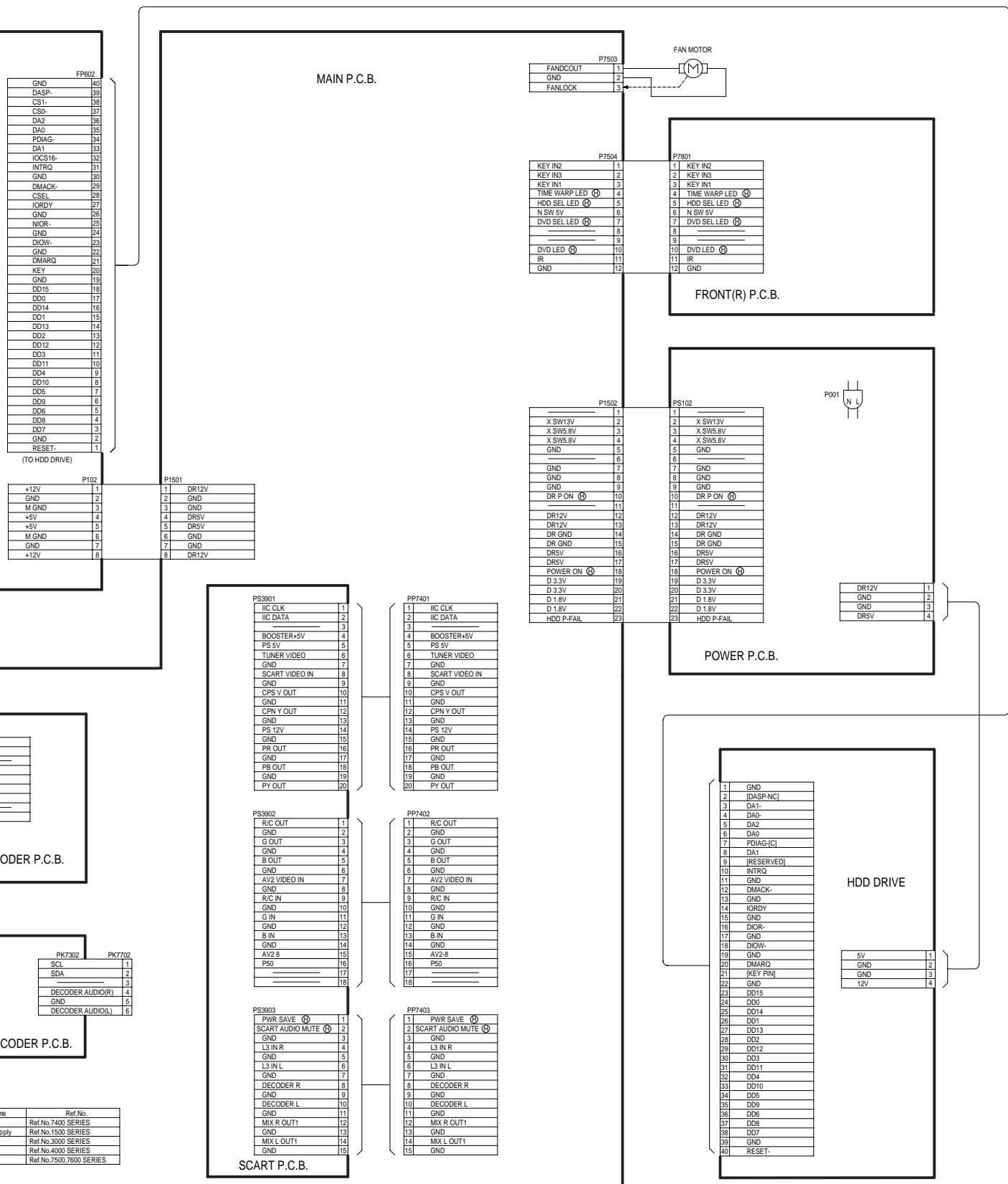
PP7401-18 REC/PLAY
1.2Vp-p ($20\mu\text{sec.div}$)



PP7401-20 REC/PLAY
2.0Vp-p ($20\mu\text{sec.div}$)

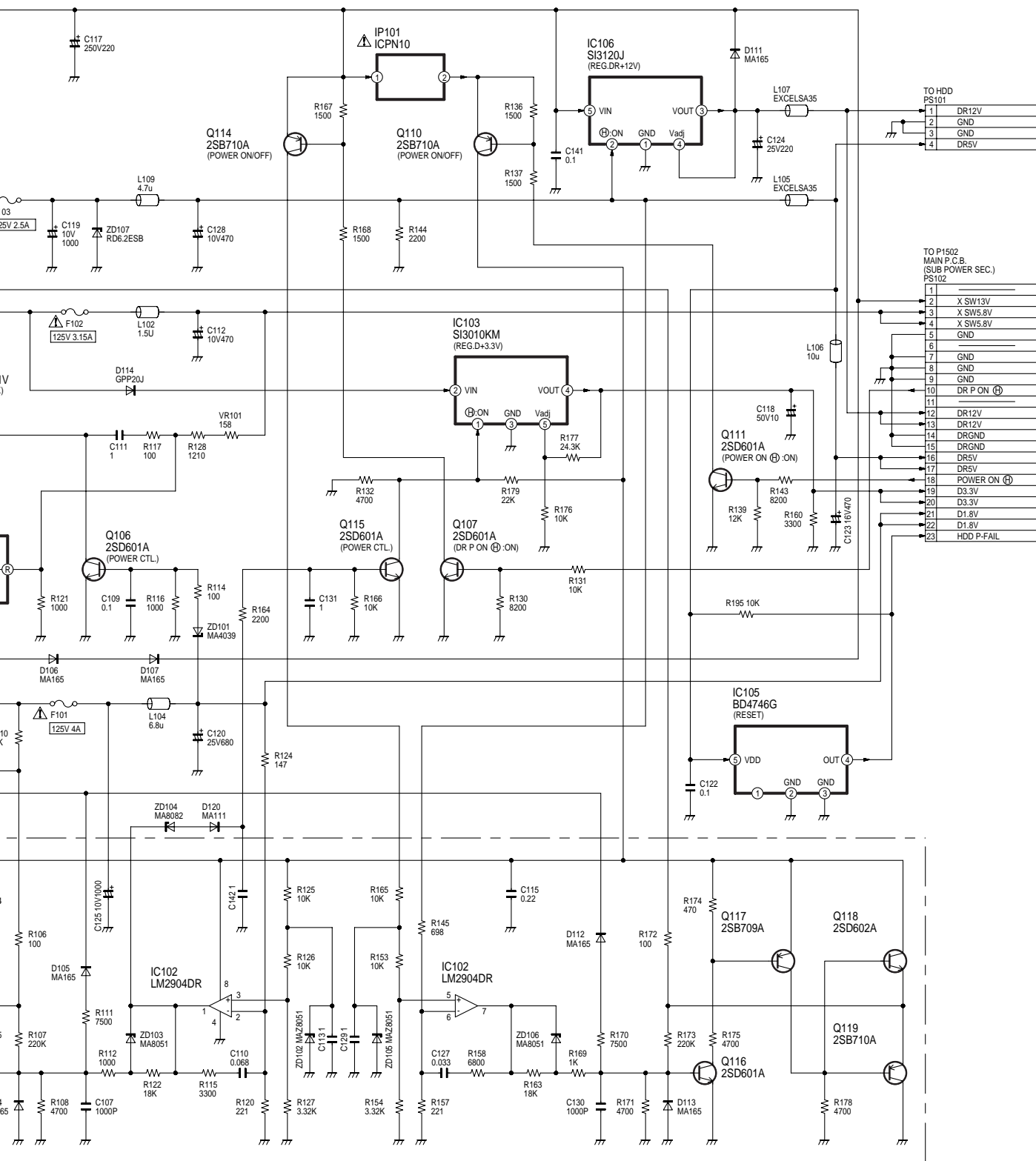
17.1. Interconnection Schematic Diagram





DMR-E85HEE/GCS/GN
Interconnection
Schematic Diagram

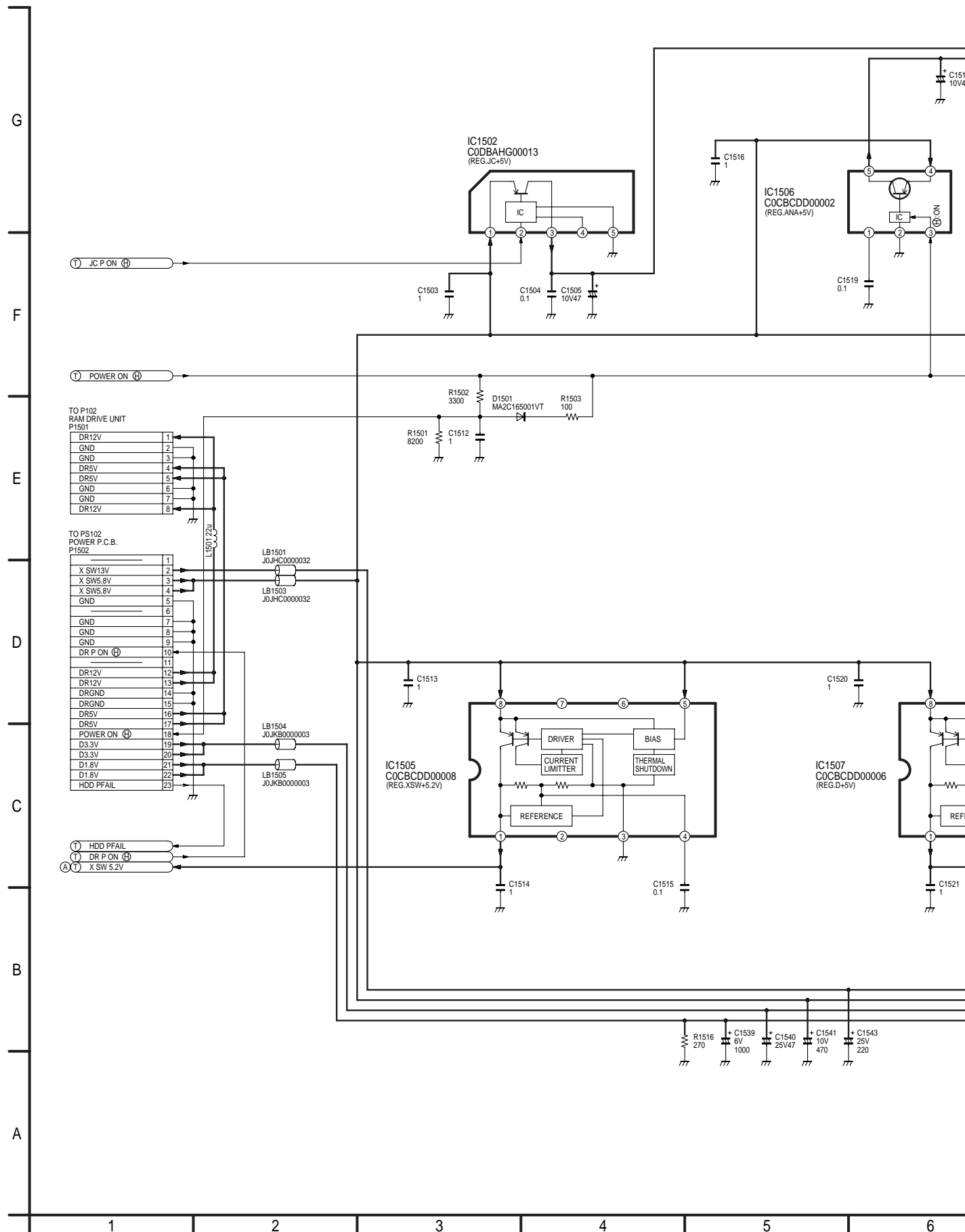




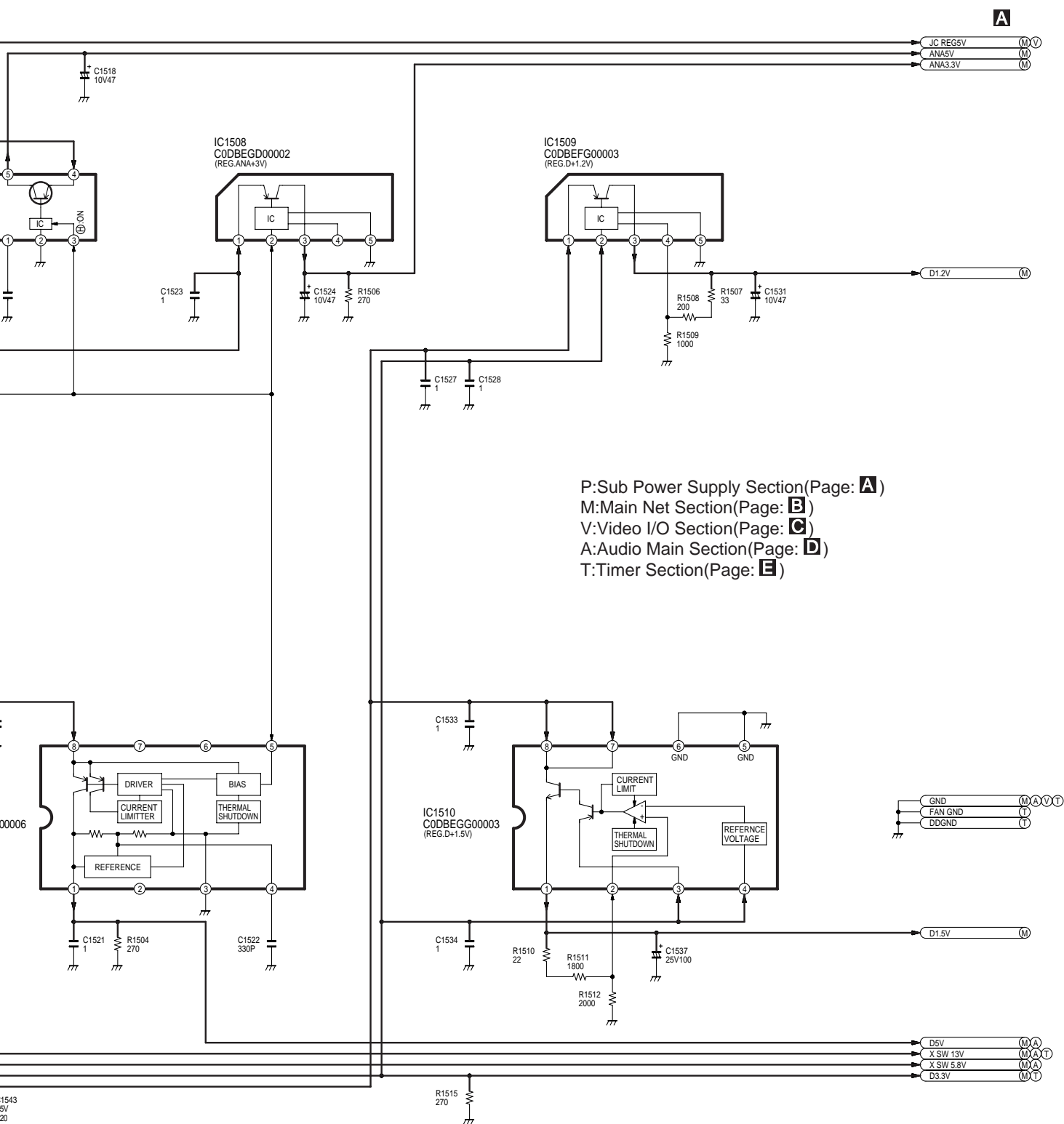
USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN
PARTS LIST,AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DMR-E85HEE/GCS/GN
Main Power Supply
Schematic Diagram

17.3. Sub Power Supply Section (Main P.C.B. (1/5)) Schematic Diagram (P)



(P)



DMR-E85HEE/GCS/GN
Sub Power Supply Section
(Main P.C.B.(1/5))
Schematic Diagram(P)

NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN
IN THE PARTS LIST,AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

6

7

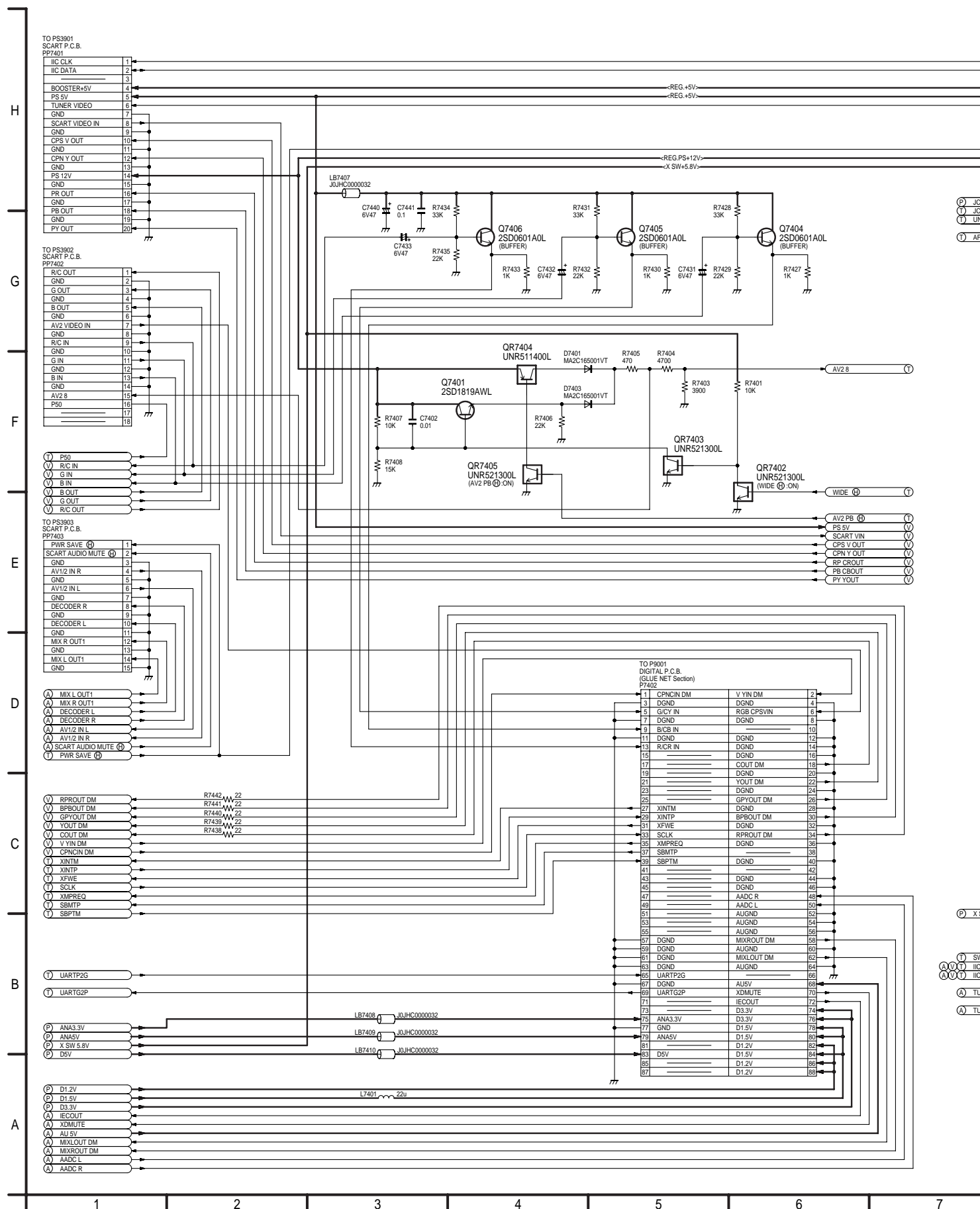
8

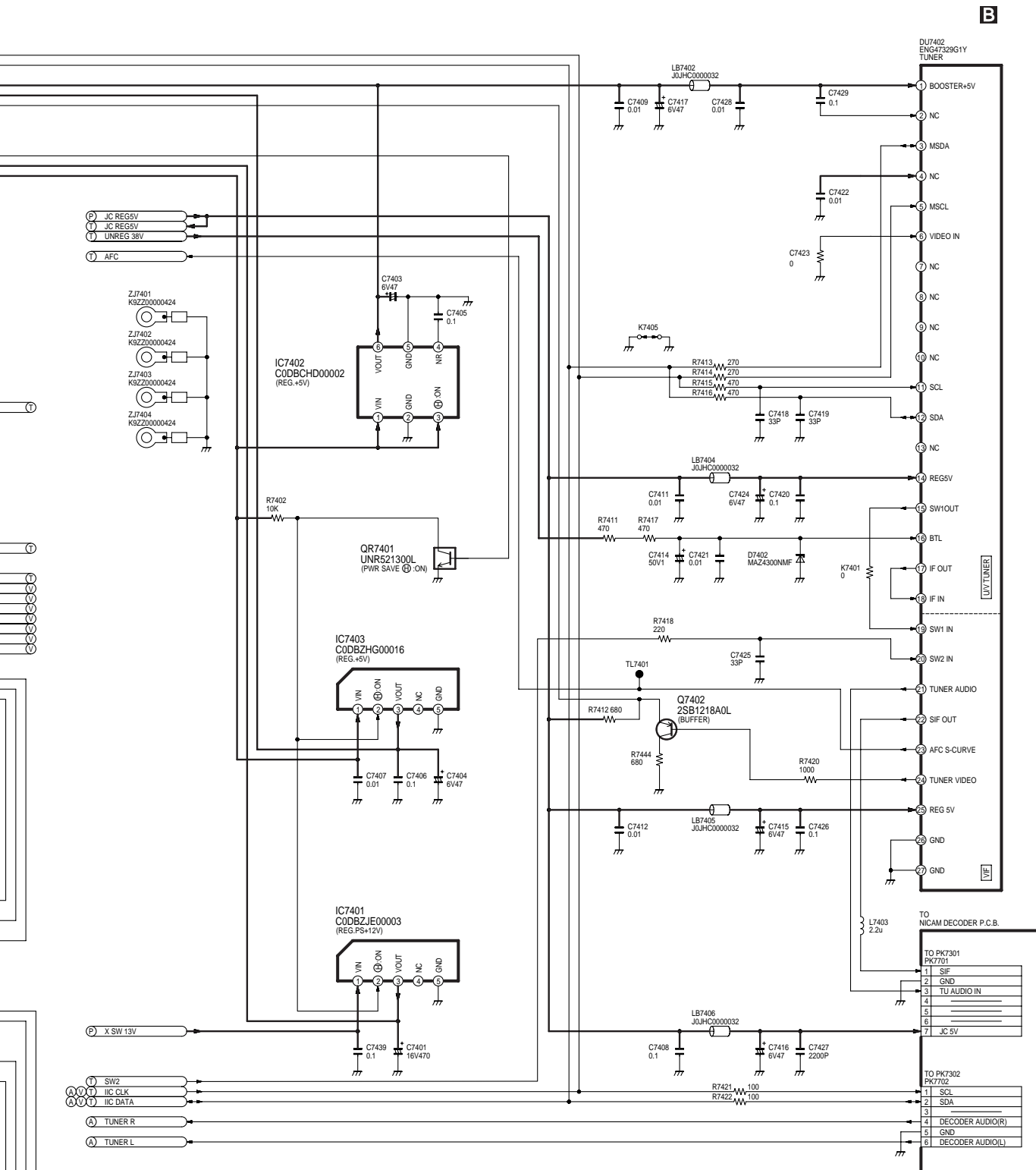
9

10

11

17.4. Main Net Section (Main P.C.B. (2/5)) Schematic Diagram (M)





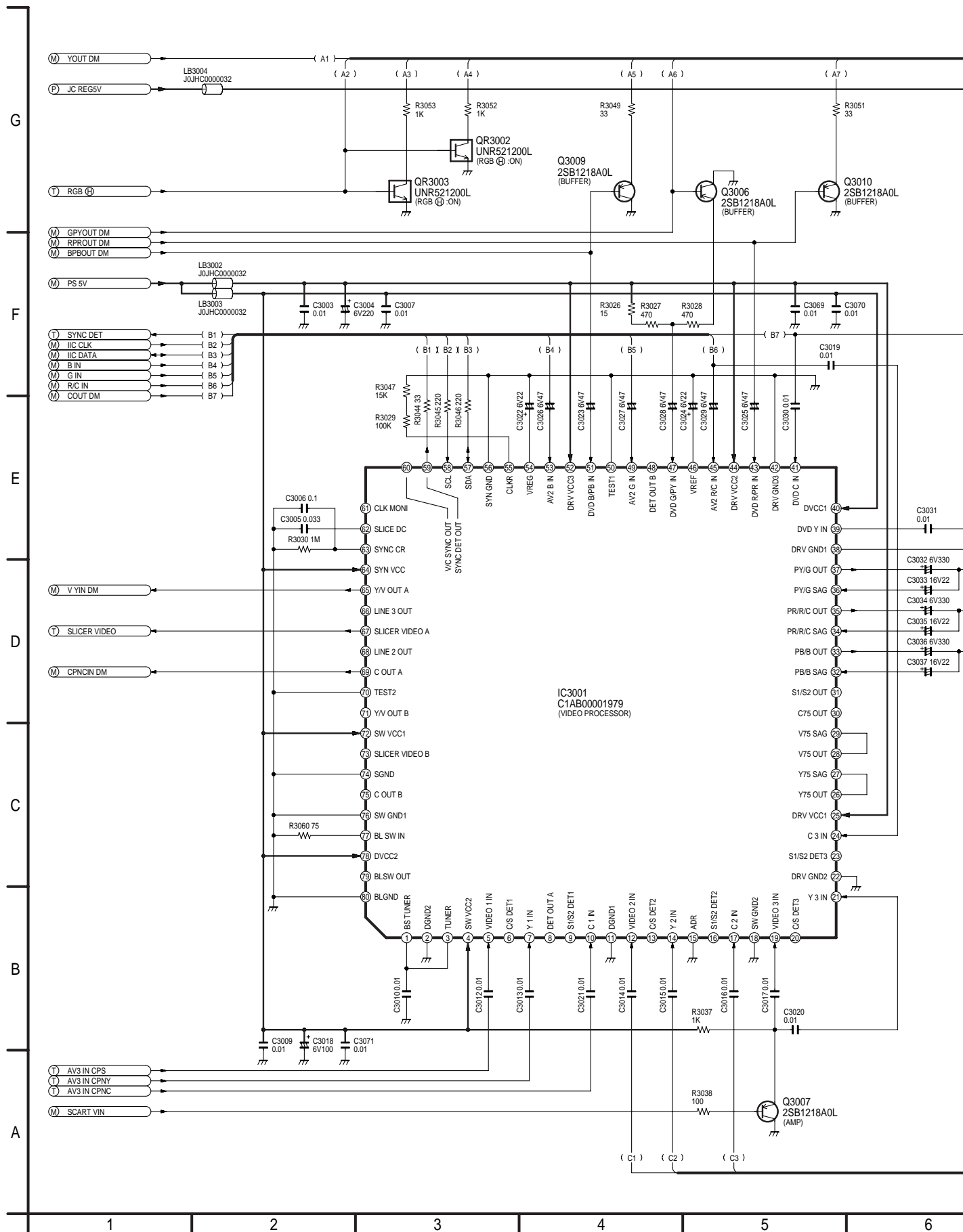
P:Sub Power Supply Section(Page: **A**)
M:Main Net Section(Page: **B**)
V:Video I/O Section(Page: **C**)
A:Audio Main Section(Page: **D**)
T:Timer Section(Page: **E**)

DMR-E85HEE/GCS/GN
Main Net Section
(Main P.C.B.(2/5))
Schematic Diagram(M)

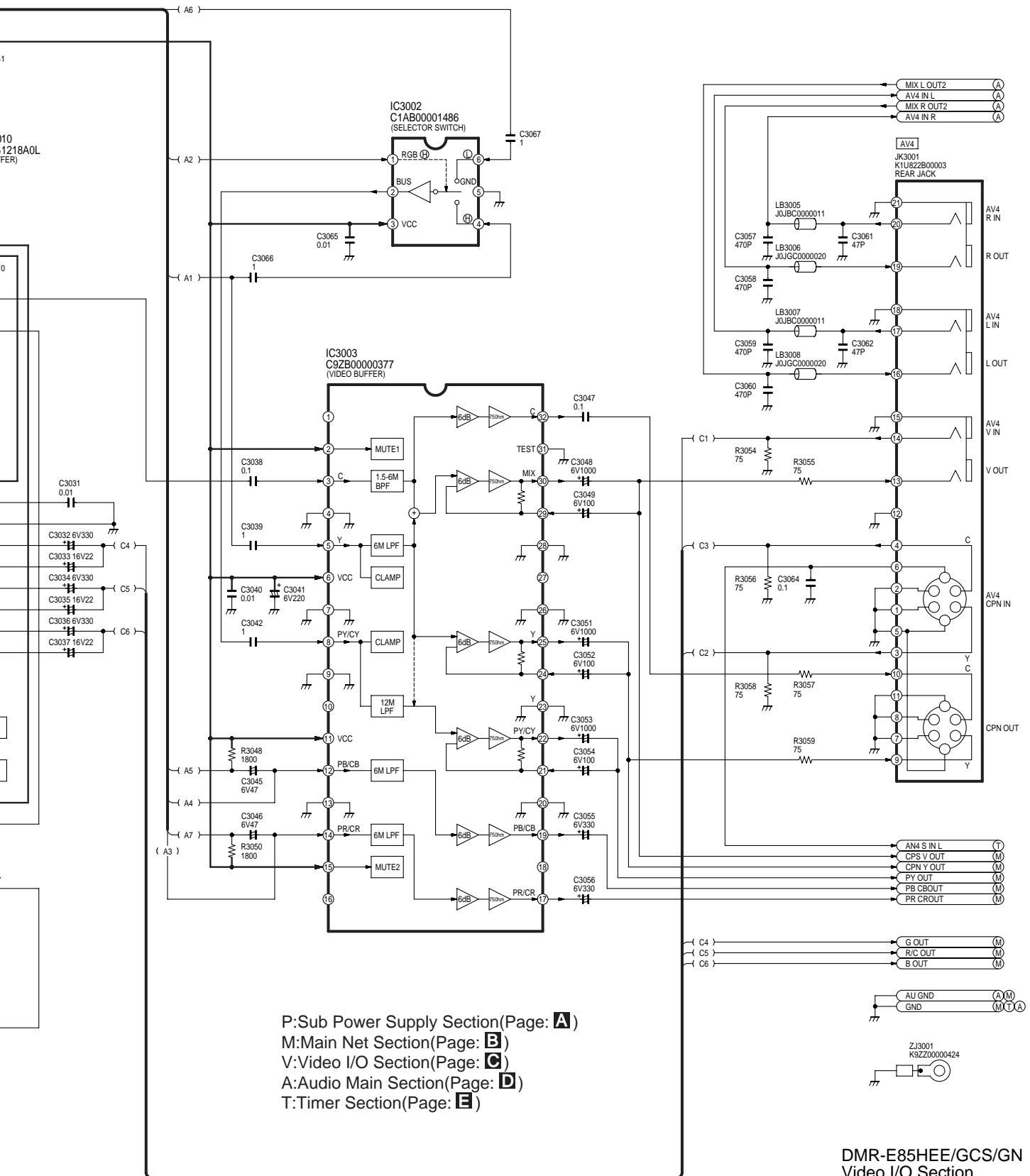
NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

7 8 9 10 11 12 13

17.5. Video I/O Section (Main P.C.B. (3/5)) Schematic Diagram (V)



C



DMR-E85HEE/GCS/GN
Video I/O Section
(Main P.C.B.(3/5))
Schematic Diagram(V)

6

7

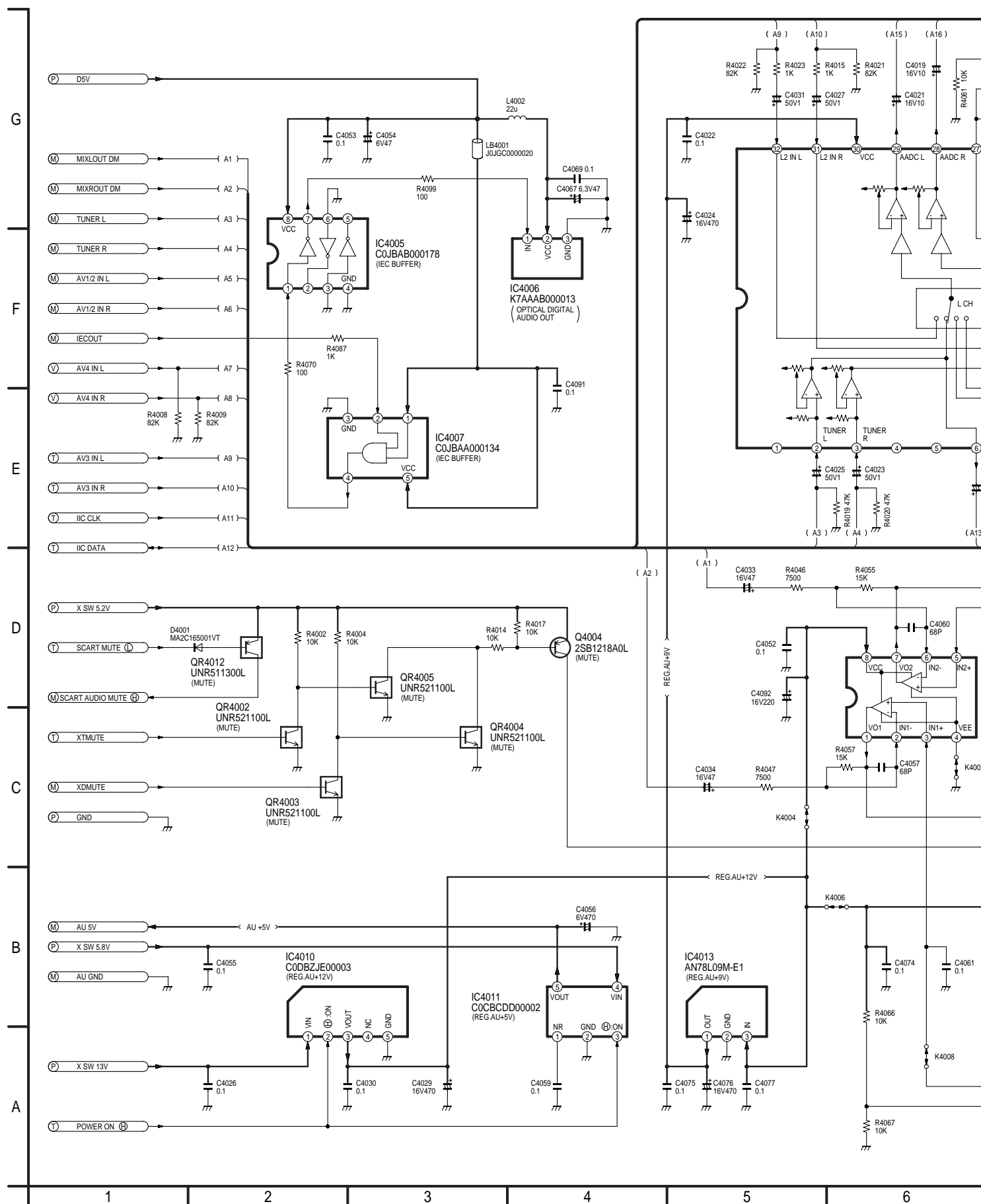
8

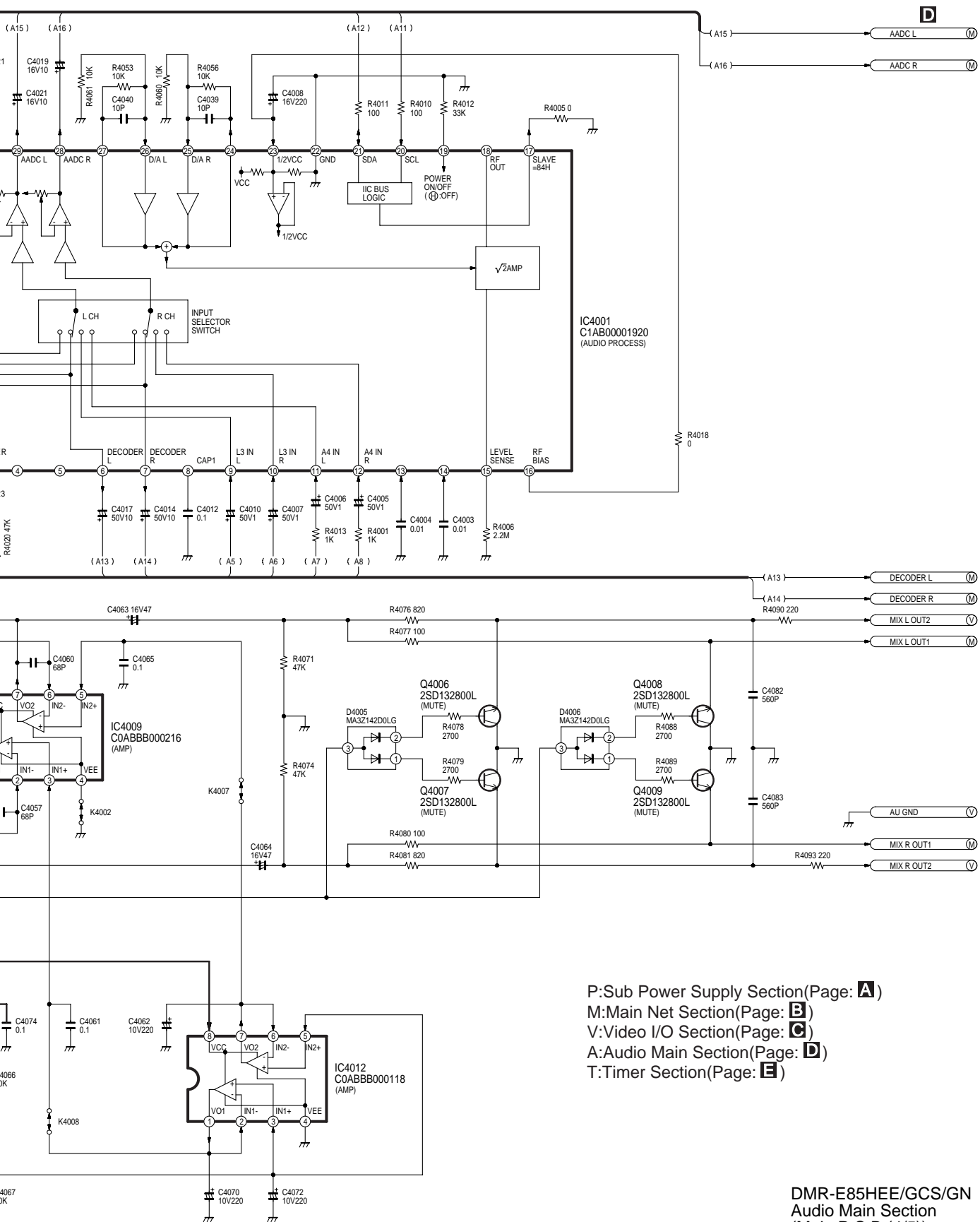
9

10

11

17.6. Audio Main Section (Main P.C.B. (4/5)) Schematic Diagram (A)





P: Sub Power Supply Section (Page: **A**)

M: Main Net Section (Page: **B**)

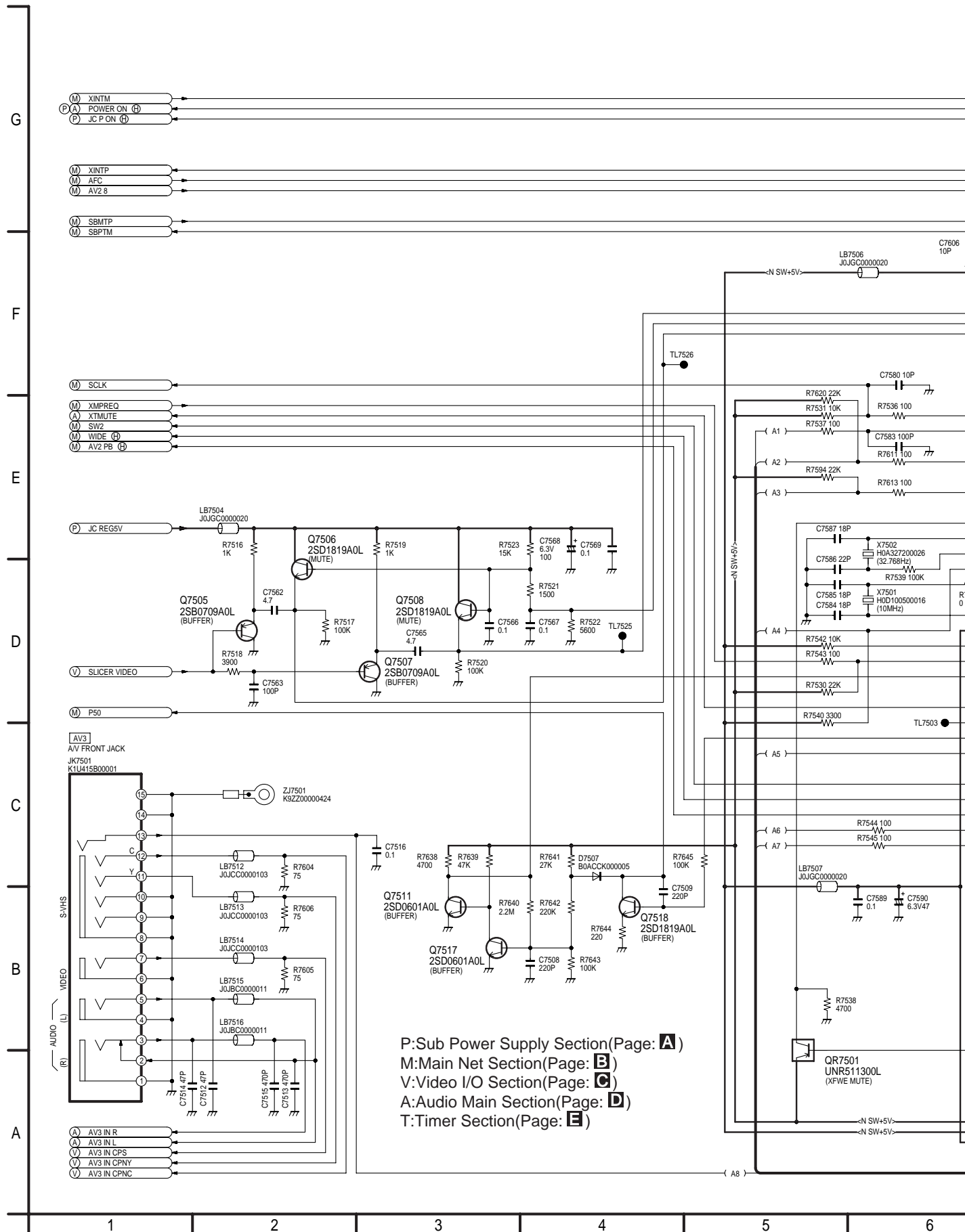
V: Video I/O Section (Page: **C**)

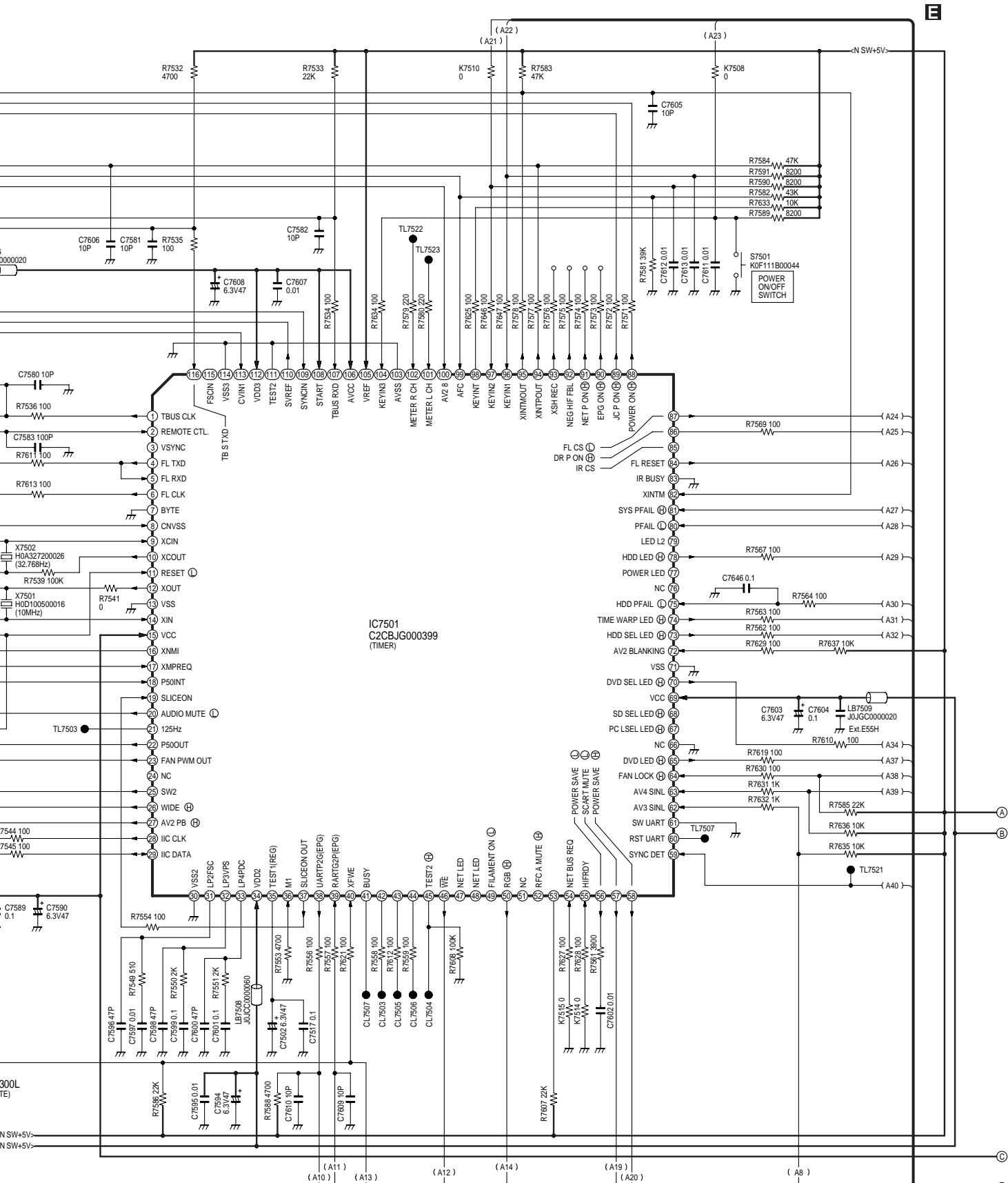
A: Audio Main Section (Page: **D**)

T: Timer Section (Page: **E**)

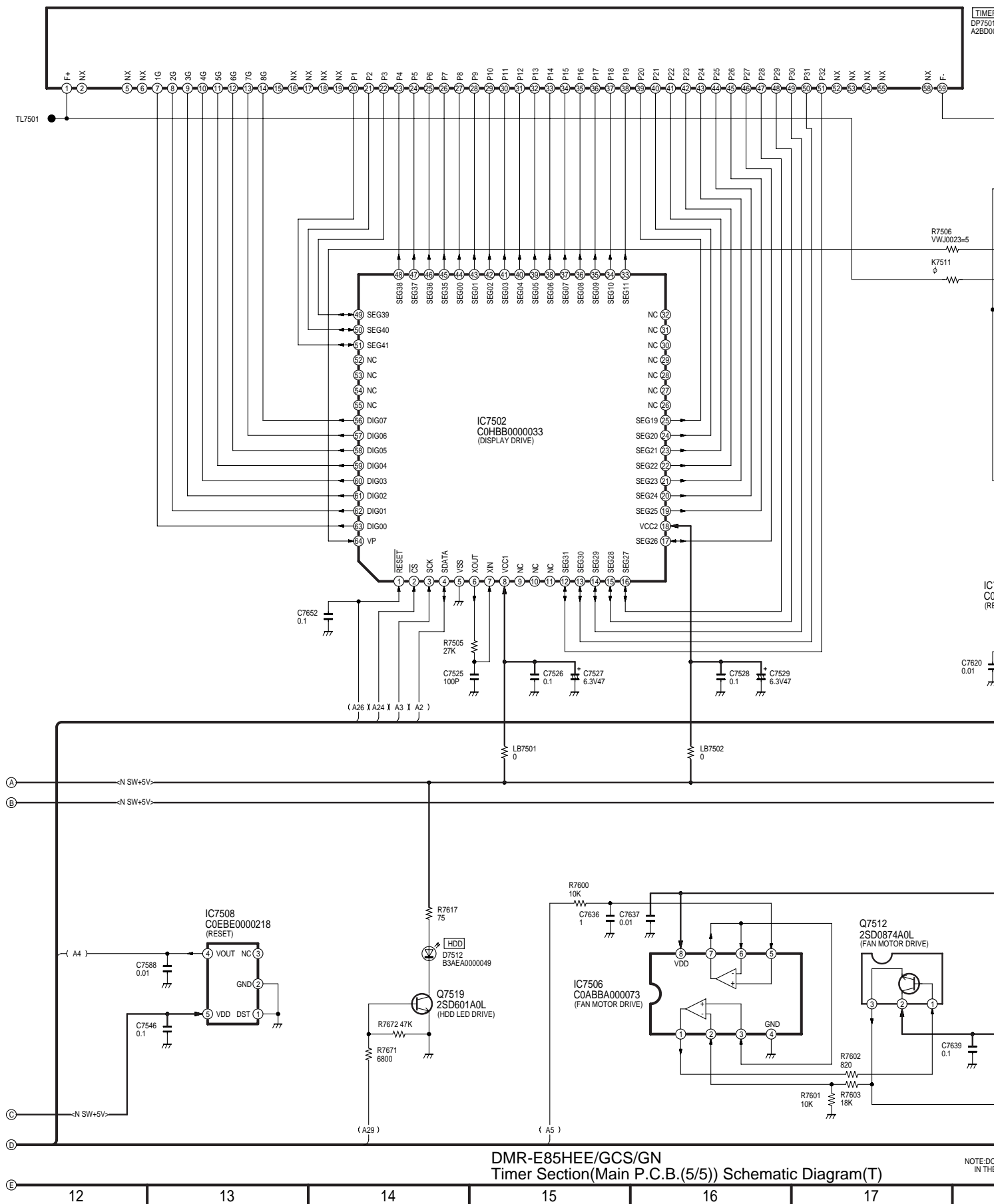
DMR-E85HEE/GCS/GN
Audio Main Section
(Main P.C.B. (4/5))
Schematic Diagram (A)

17.7. Timer Section (Main P.C.B. (5/5)) Schematic Diagram (T)



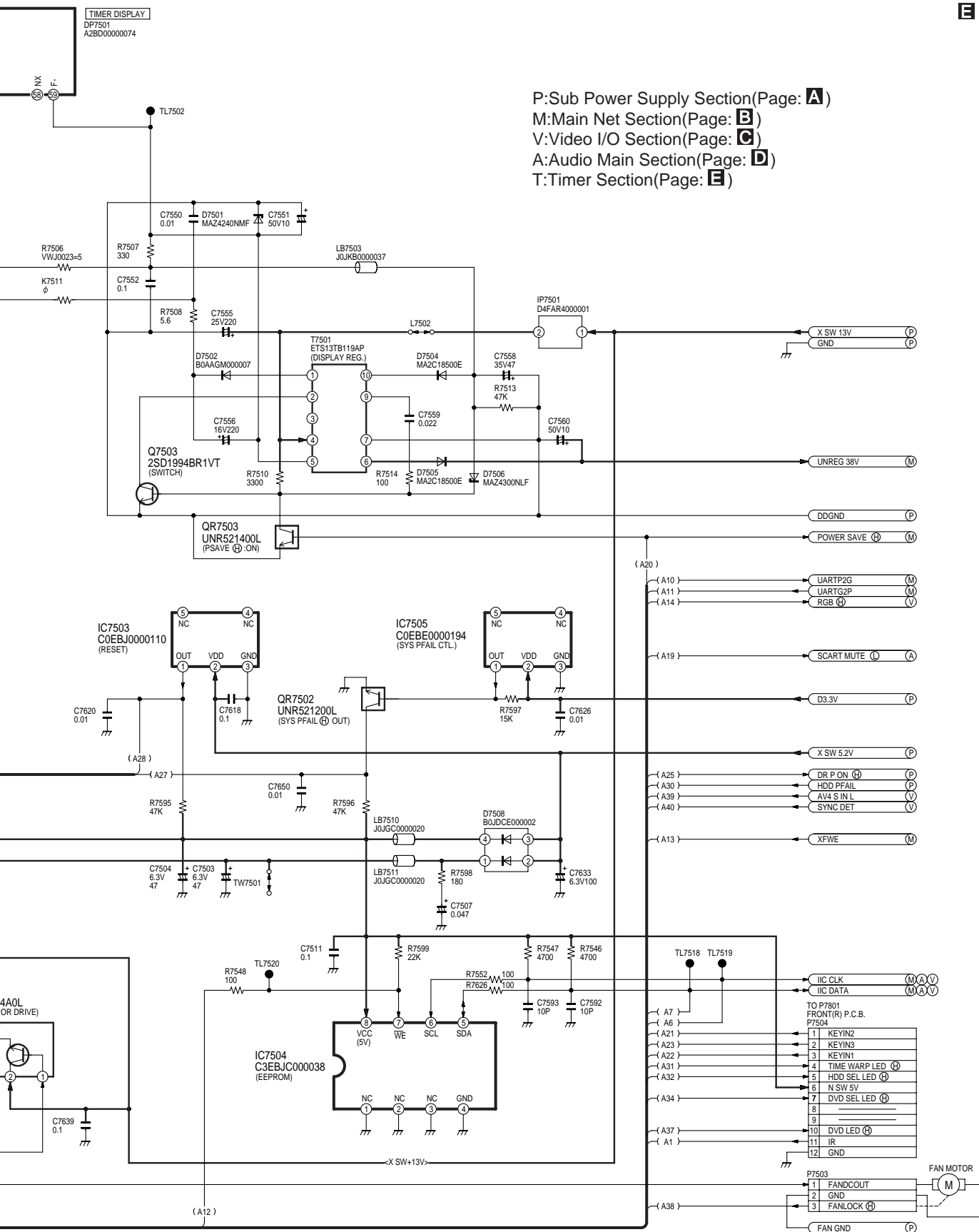


DMR-E85HEE/GCS/GN
Timer Section(Main P.C.B.(5/5)) Schematic Diagram(T)

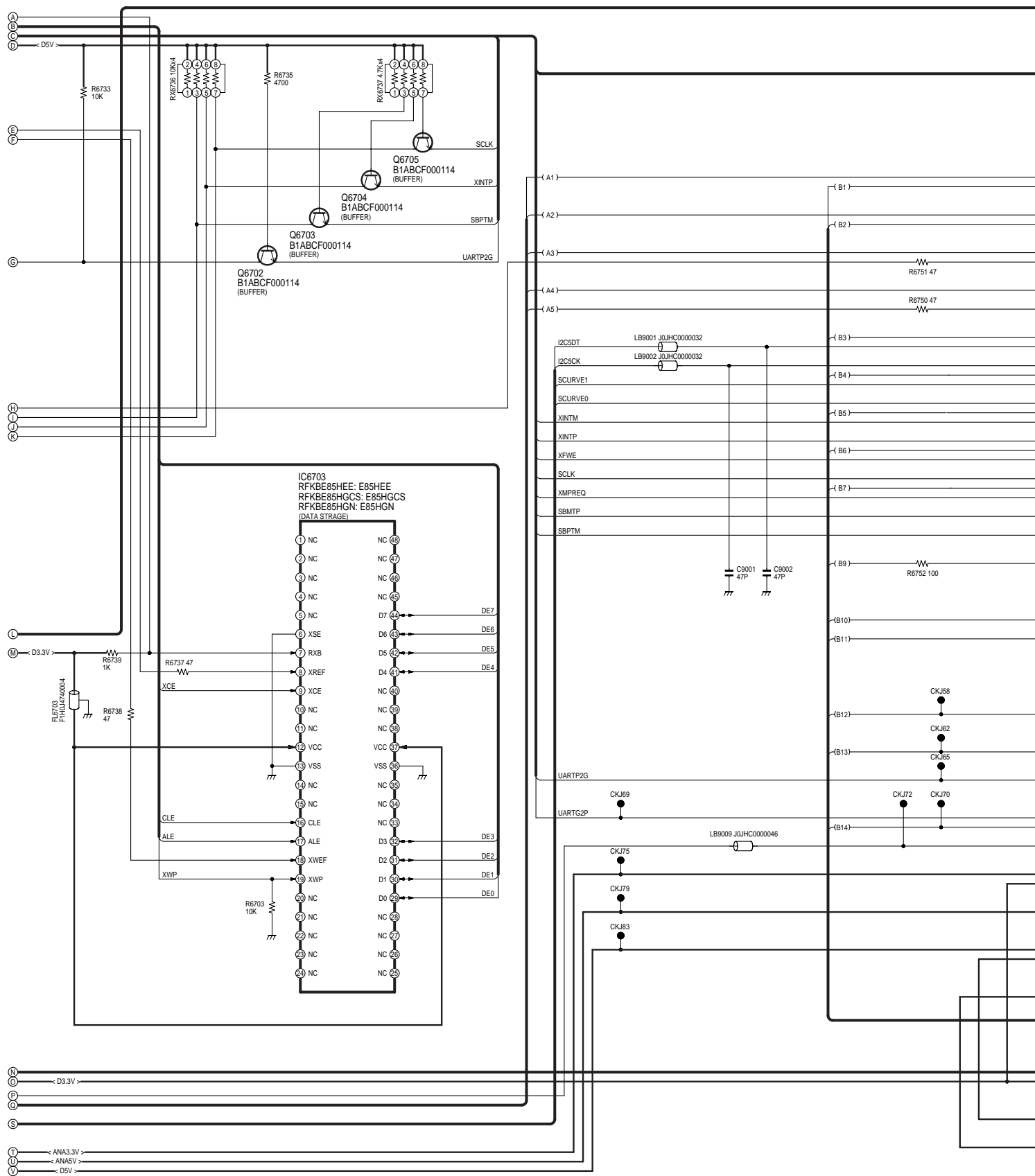


DMR-E85HEE/GCS/GN
Timer Section(Main P.C.B.(5/5)) Schematic Diagram(T)

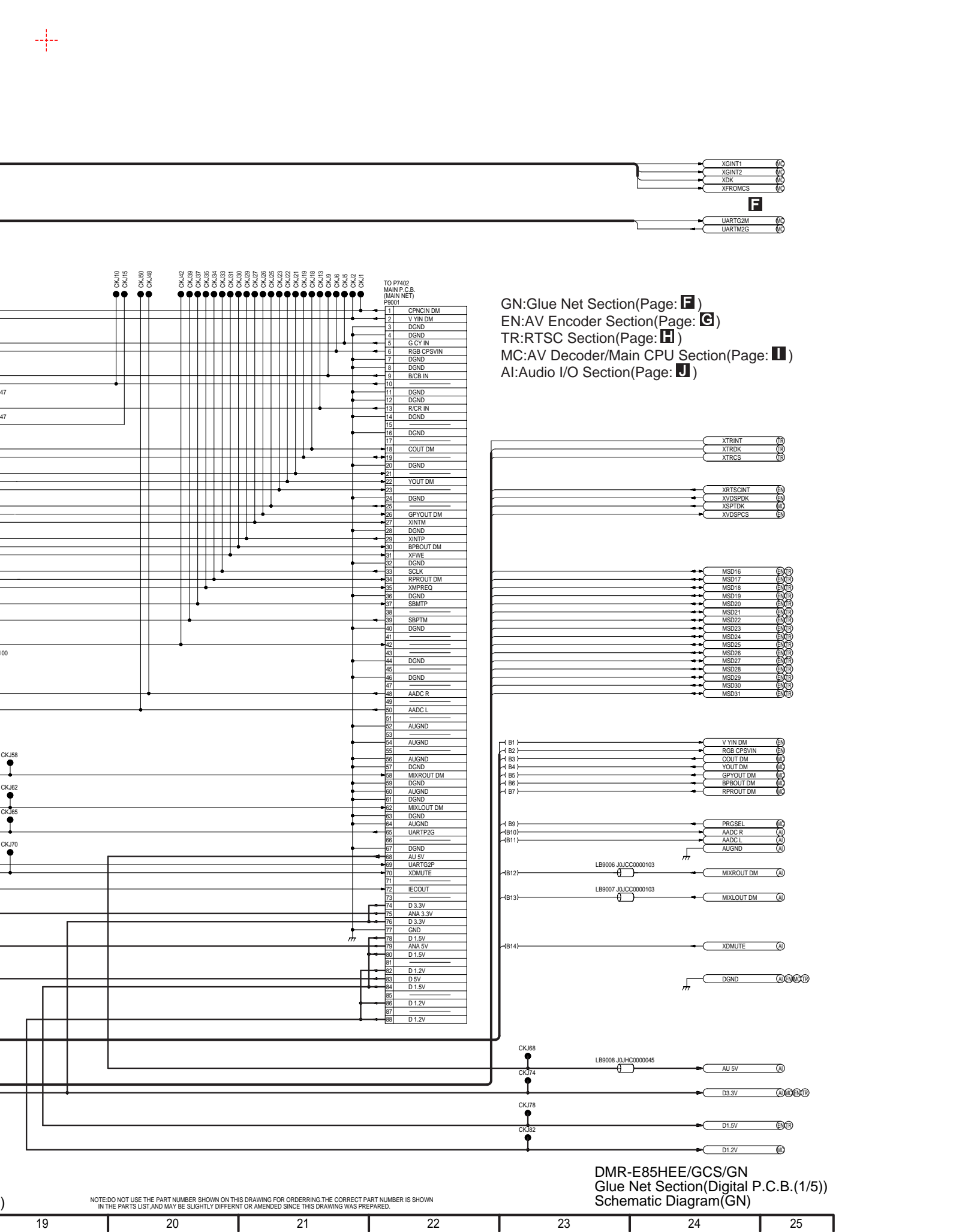
NOTE:DC
IN THE







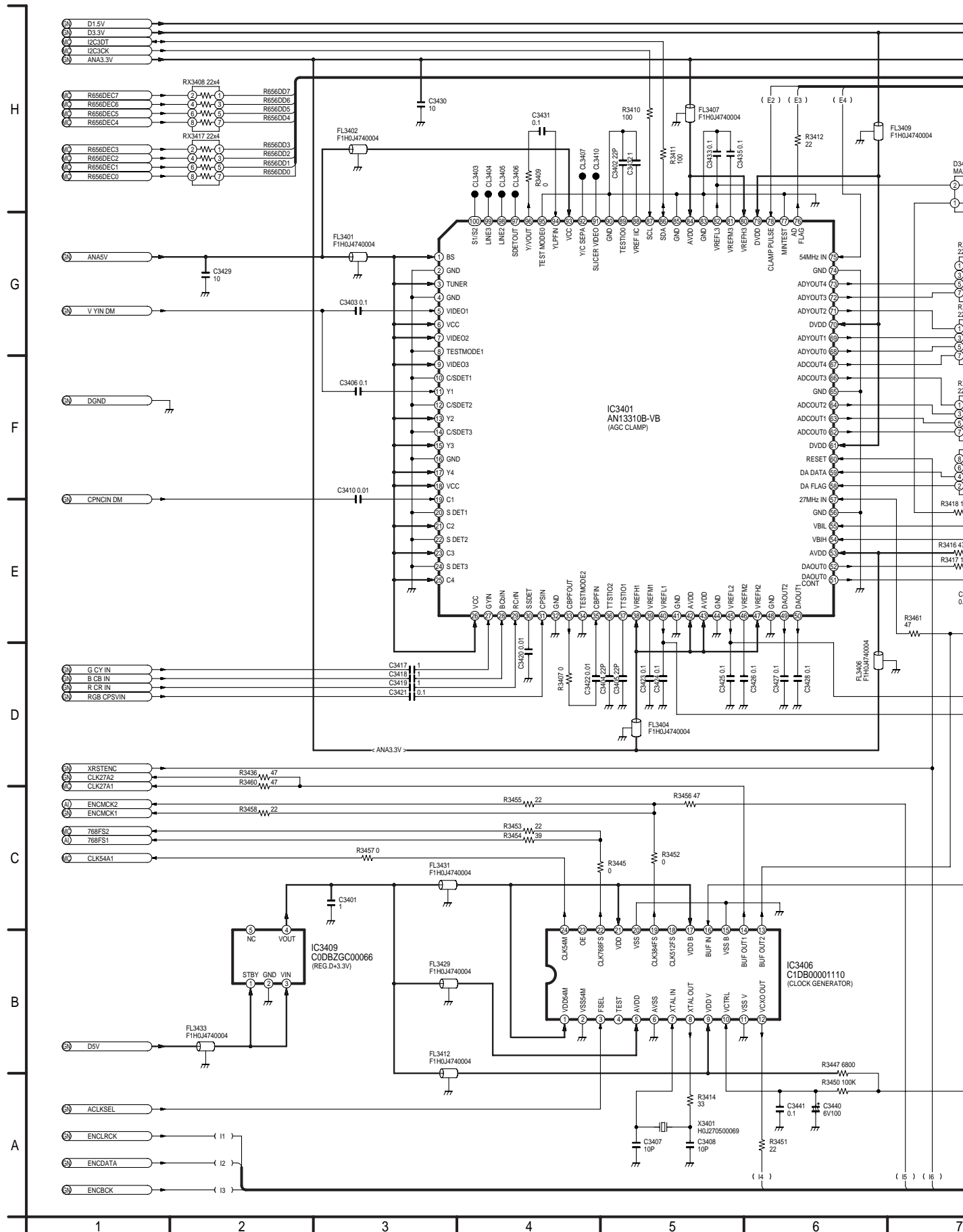
DMR-E85HEE/GCS/GN
Glue Net Section(Digital P.C.B.(1/5)) Schematic Diagram(GN)

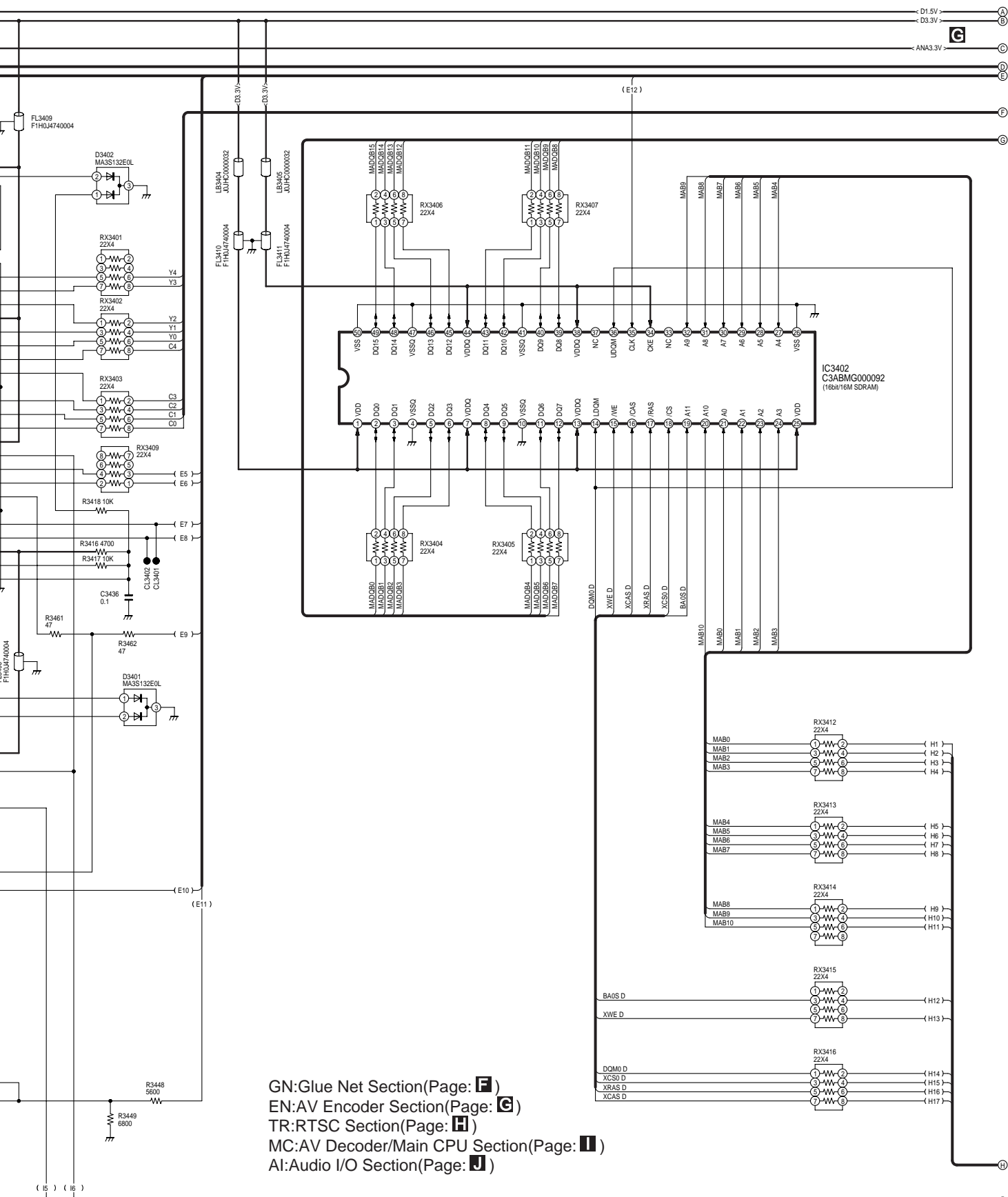


NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST,AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DMR-E85HEE/GCS/GN
Glue Net Section(Digital P.C.B.(1/5))
Schematic Diagram(GN)

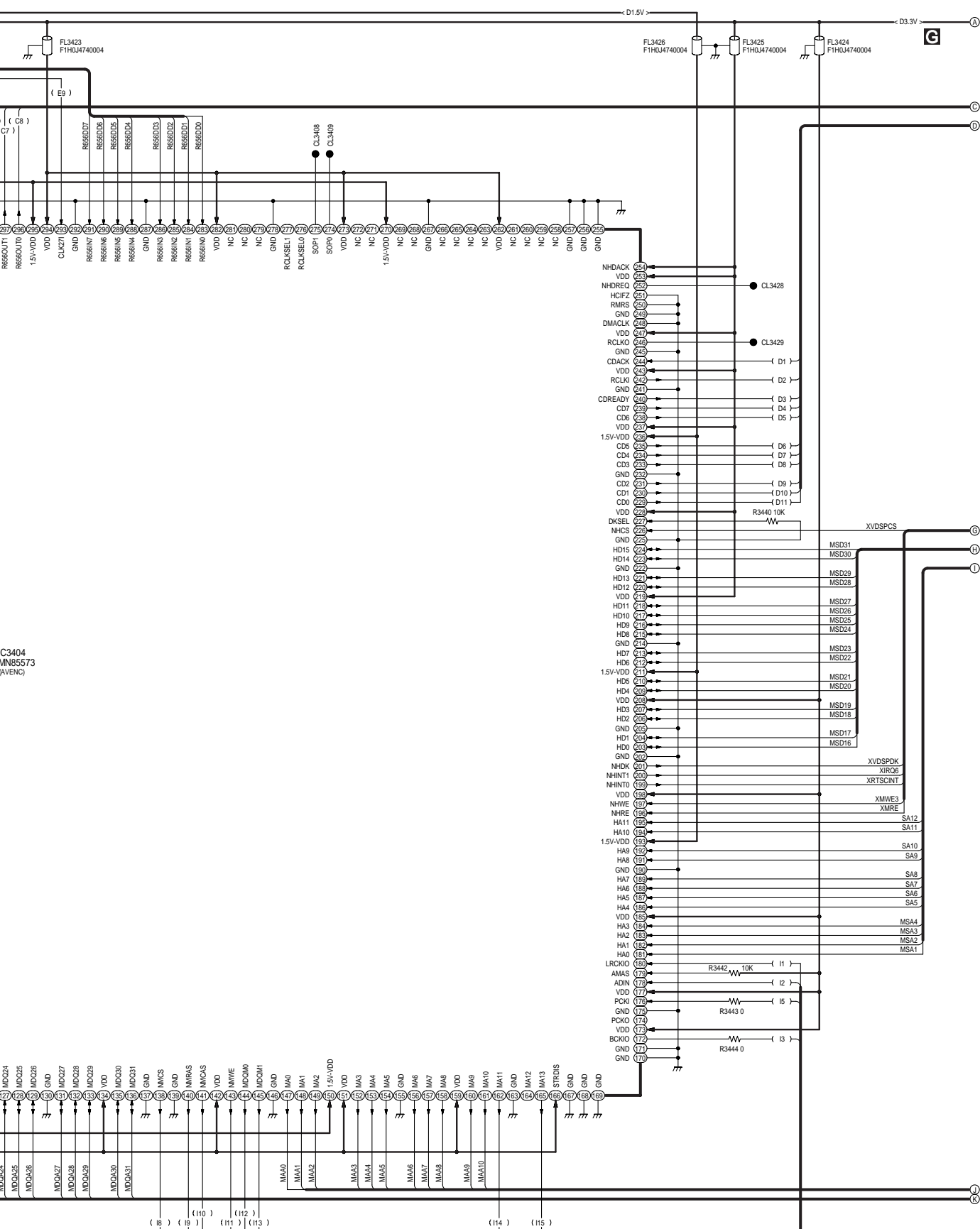
17.9. AV Encoder Section (Digital P.C.B. (2/5)) Schematic Diagram (EN)





DMR-E85HEE/GCS/GN AV Encoder Section (Digital P.C.B. (2/5)) Schematic Diagram (EN)





DMR-E85HEE/GCS/GN AV Encoder Section(Digital P.C.B.(2/5)) Schematic Diagram(EN)

20

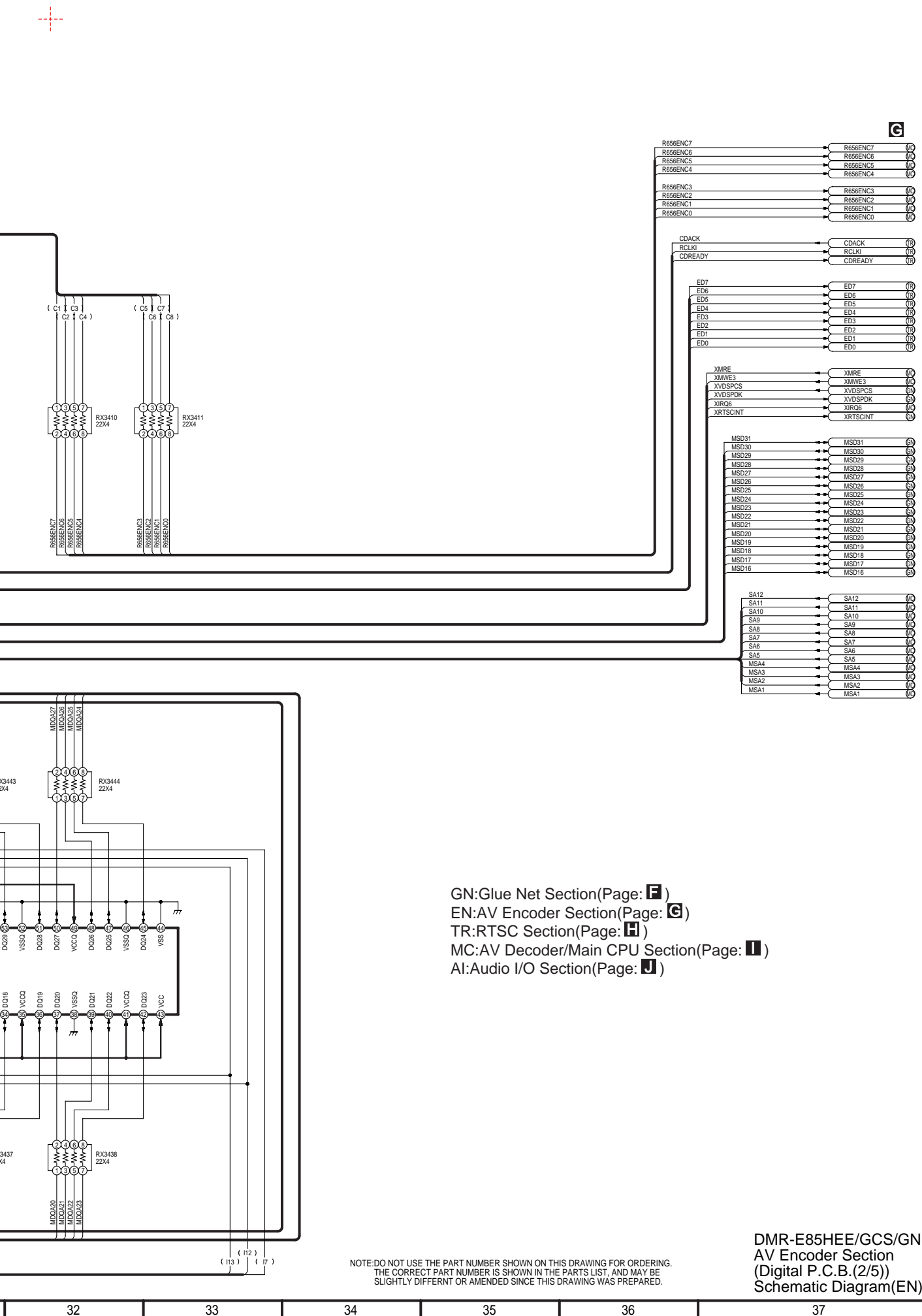
21

22

23

24

25



GN:Glue Net Section(Page: **F**)
 EN:AV Encoder Section(Page: **G**)
 TR:RTSC Section(Page: **H**)
 MC:AV Decoder/Main CPU Section(Page: **I**)
 AI:Audio I/O Section(Page: **J**)

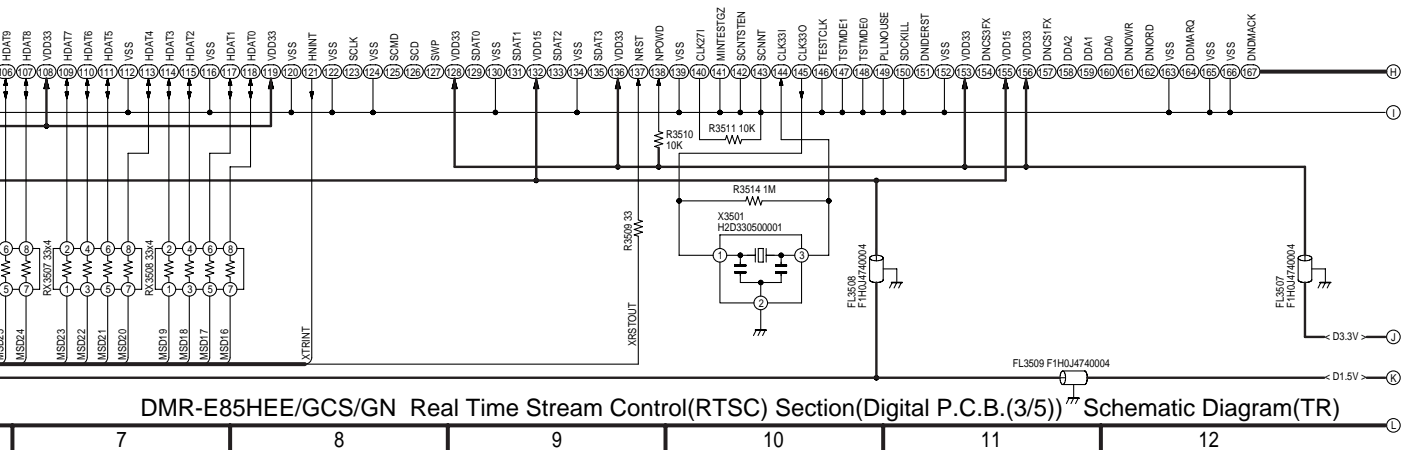
NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.
 THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE
 SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

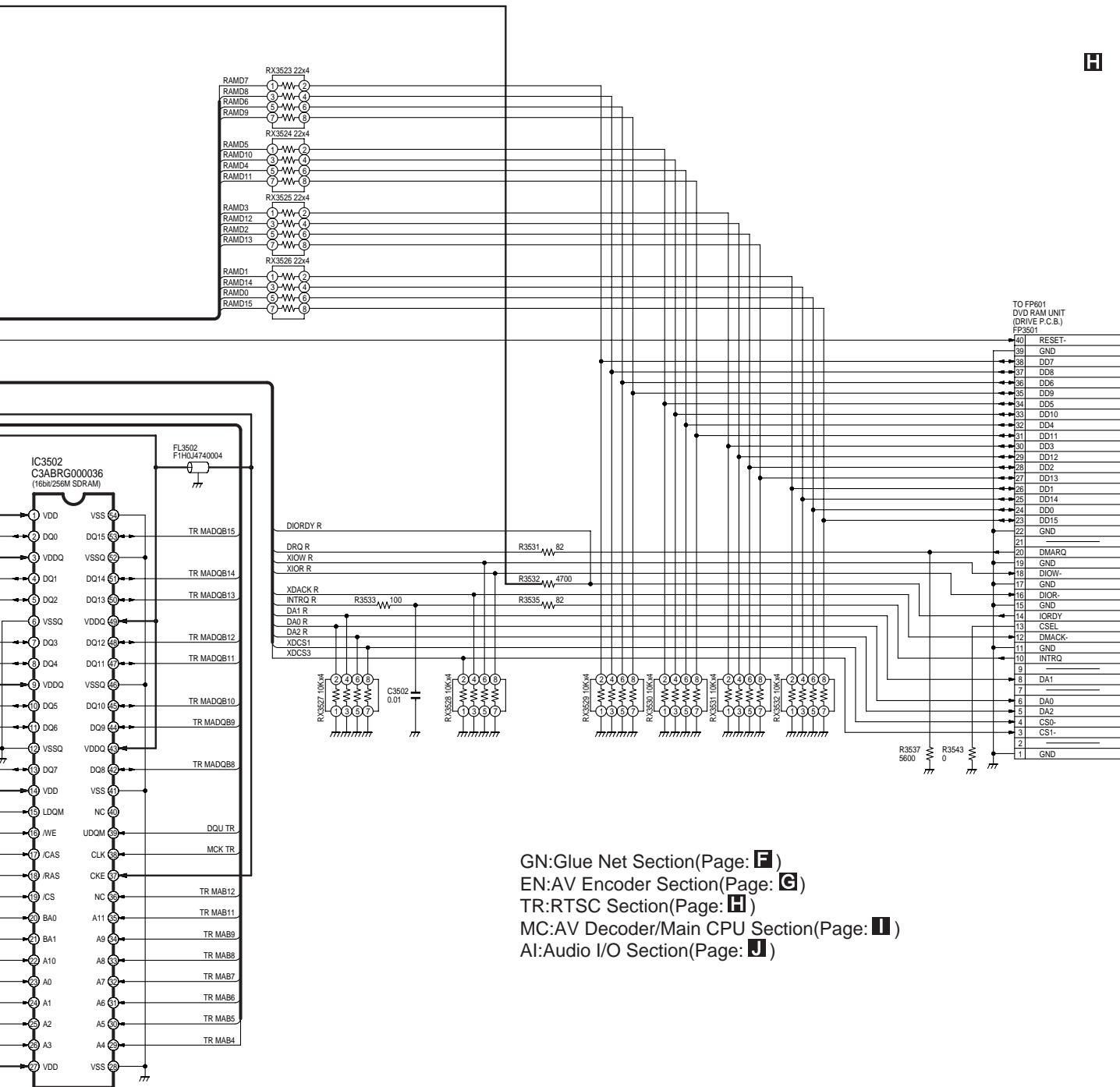
DMR-E85HEE/GCS/GN
 AV Encoder Section
 (Digital P.C.B.(2/5))
 Schematic Diagram(EN)



[illegible]

IC3501
MN88302
(RTSC)





NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST,AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DMR-E85HEE/GCS/GN
 Real Time Stream Control(RTSC) Section
 (Digital P.C.B.(3/5))
 Schematic Diagram(TR)



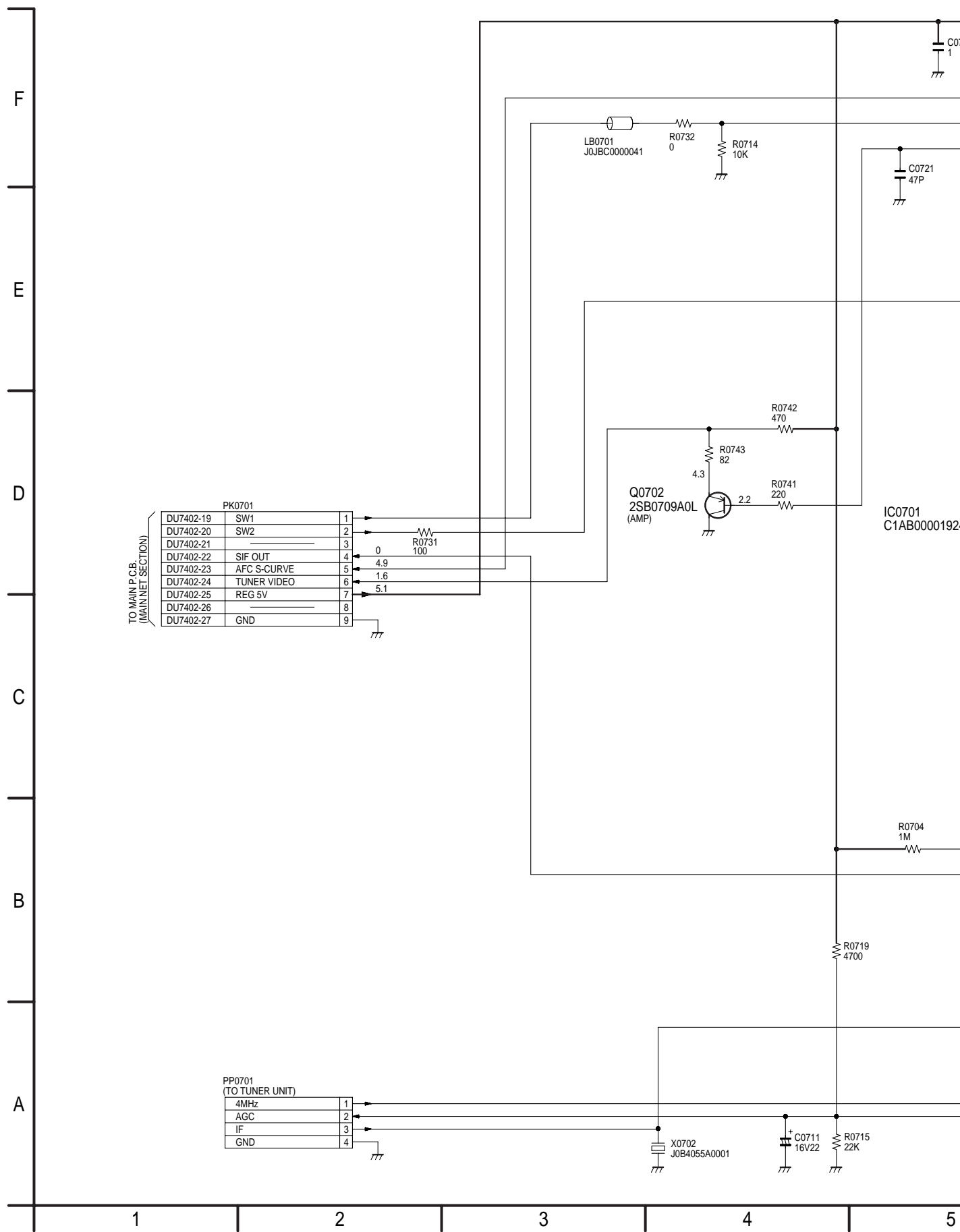
IC6001
MN2DS0011-H
(AVDEC/MAIN CPU)

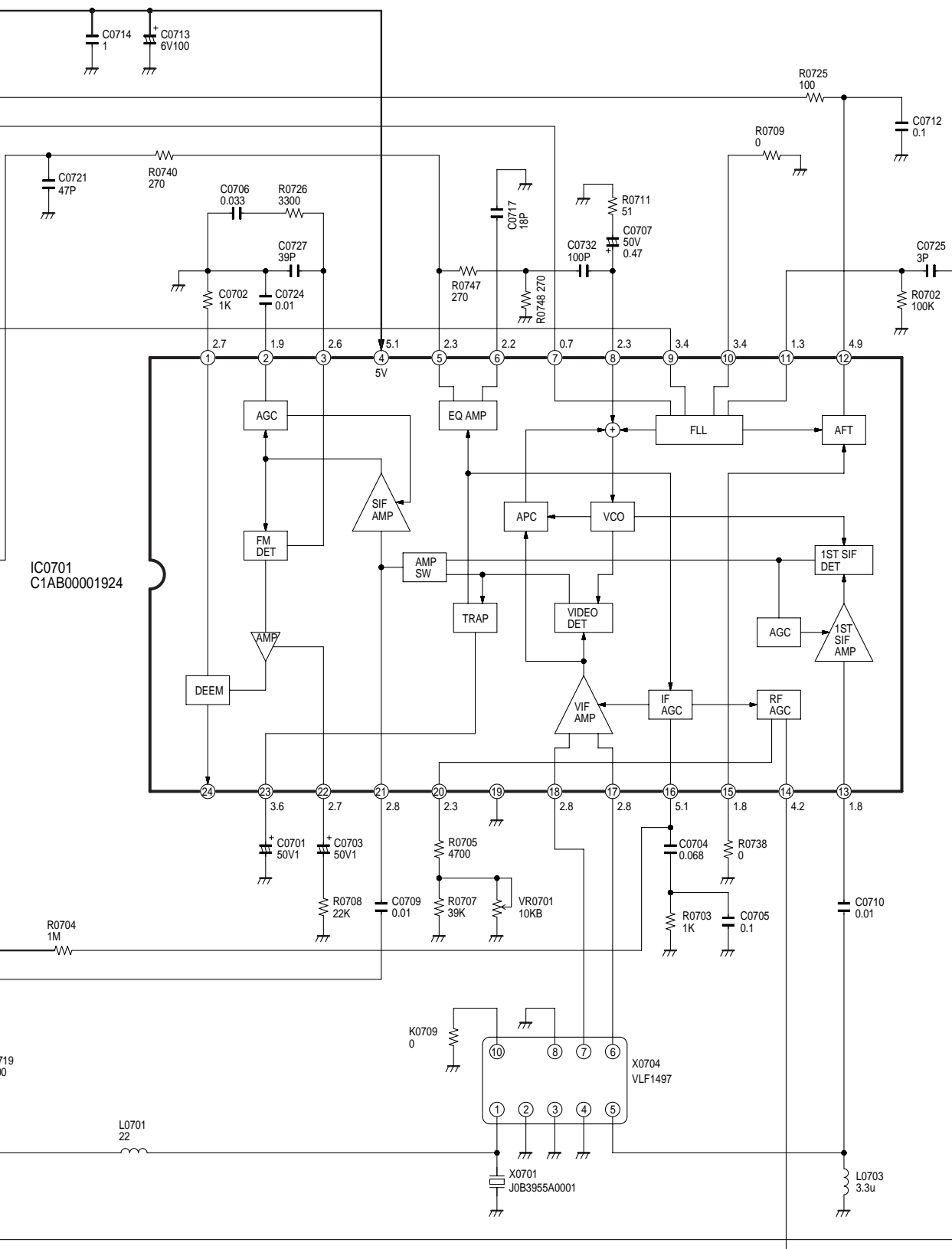
DMR-E85HEE/GCS/GN AV Decoder/Main CPU Section(Digital P.C.B.(4/5)) Schematic Diagram(MC)



NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING
IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT

17.13. VIF Decoder Schematic Diagram





NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

DMR-E85HEE/GCS/GN
VIF Decoder Schematic Diagram

5

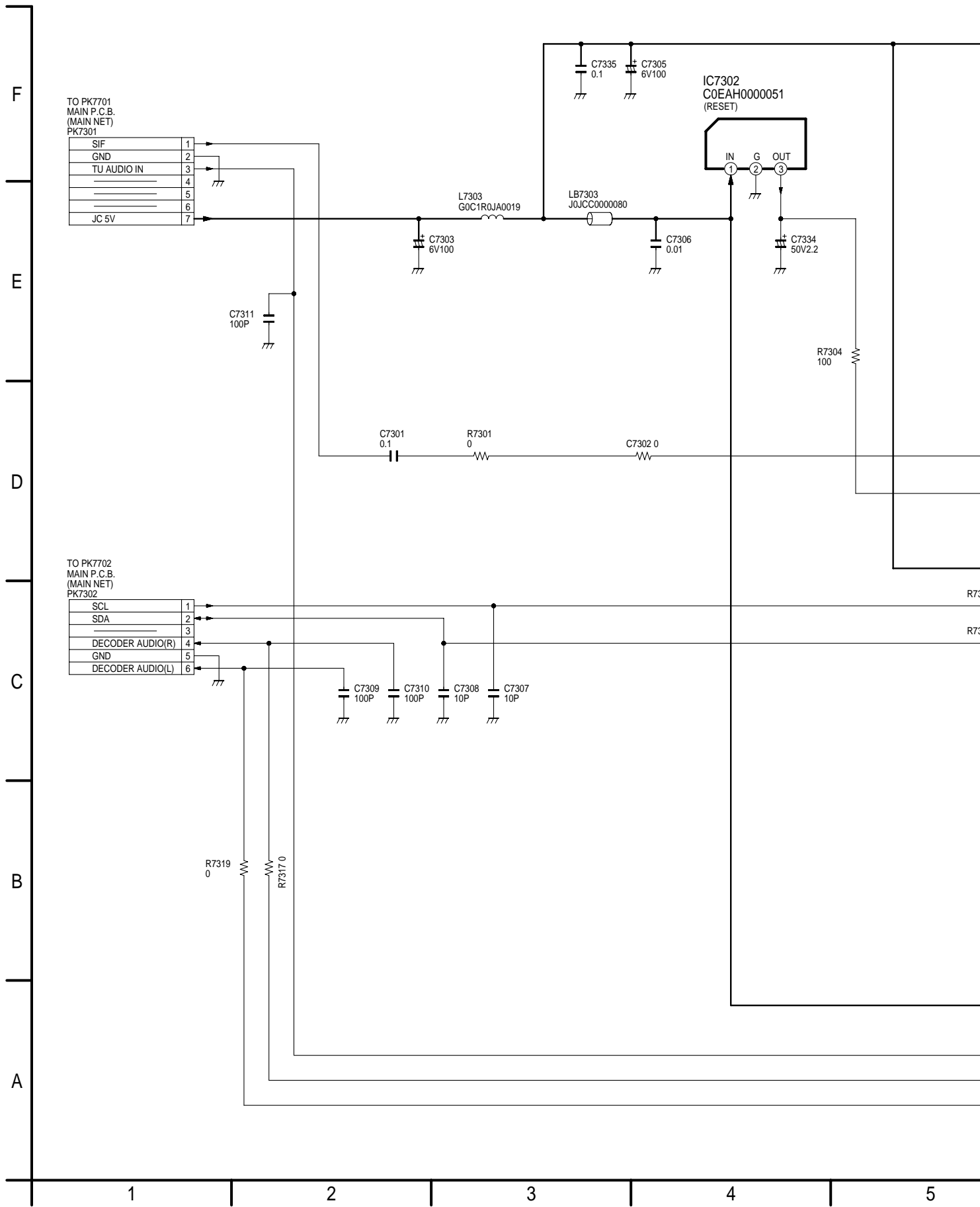
6

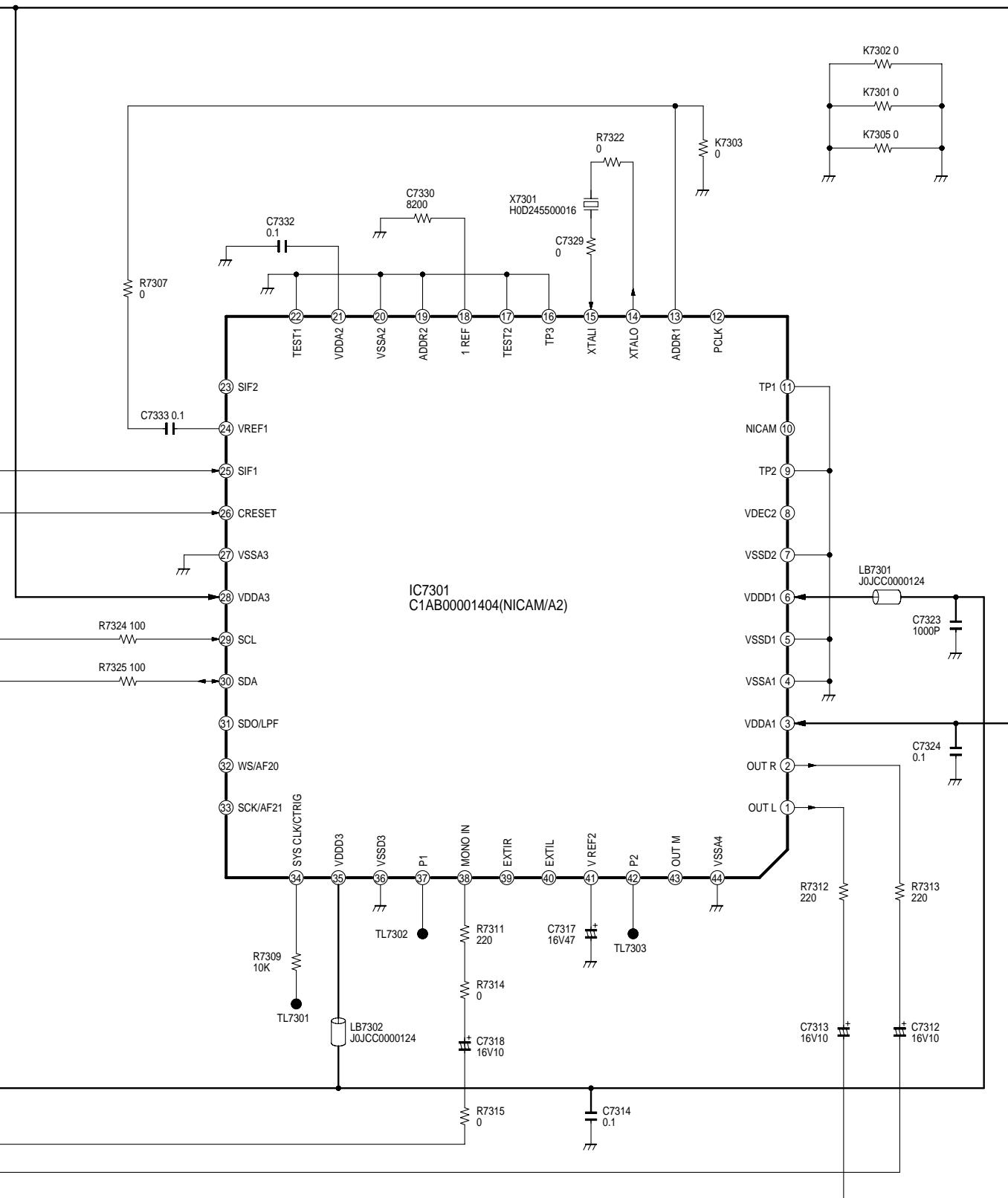
7

8

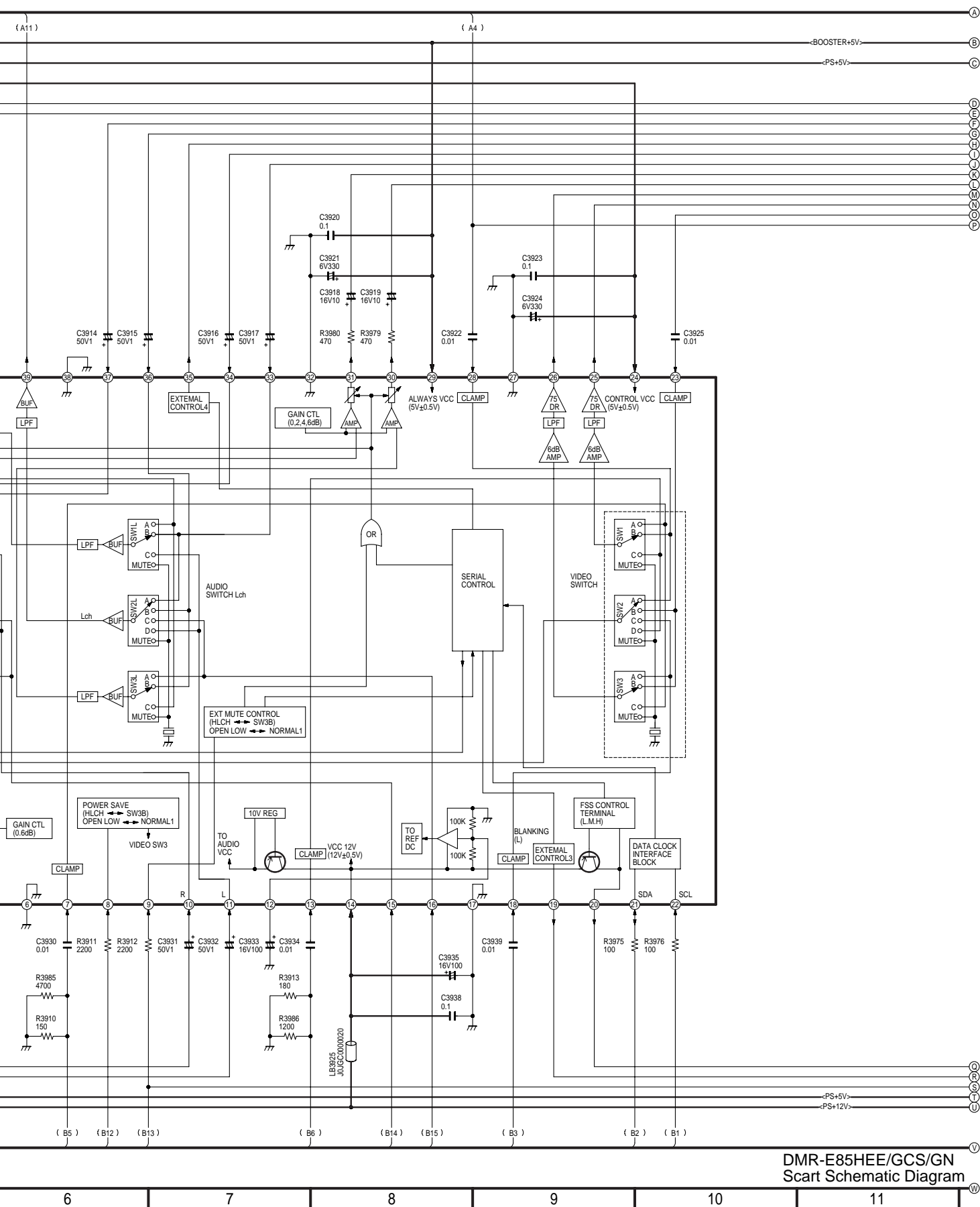
9

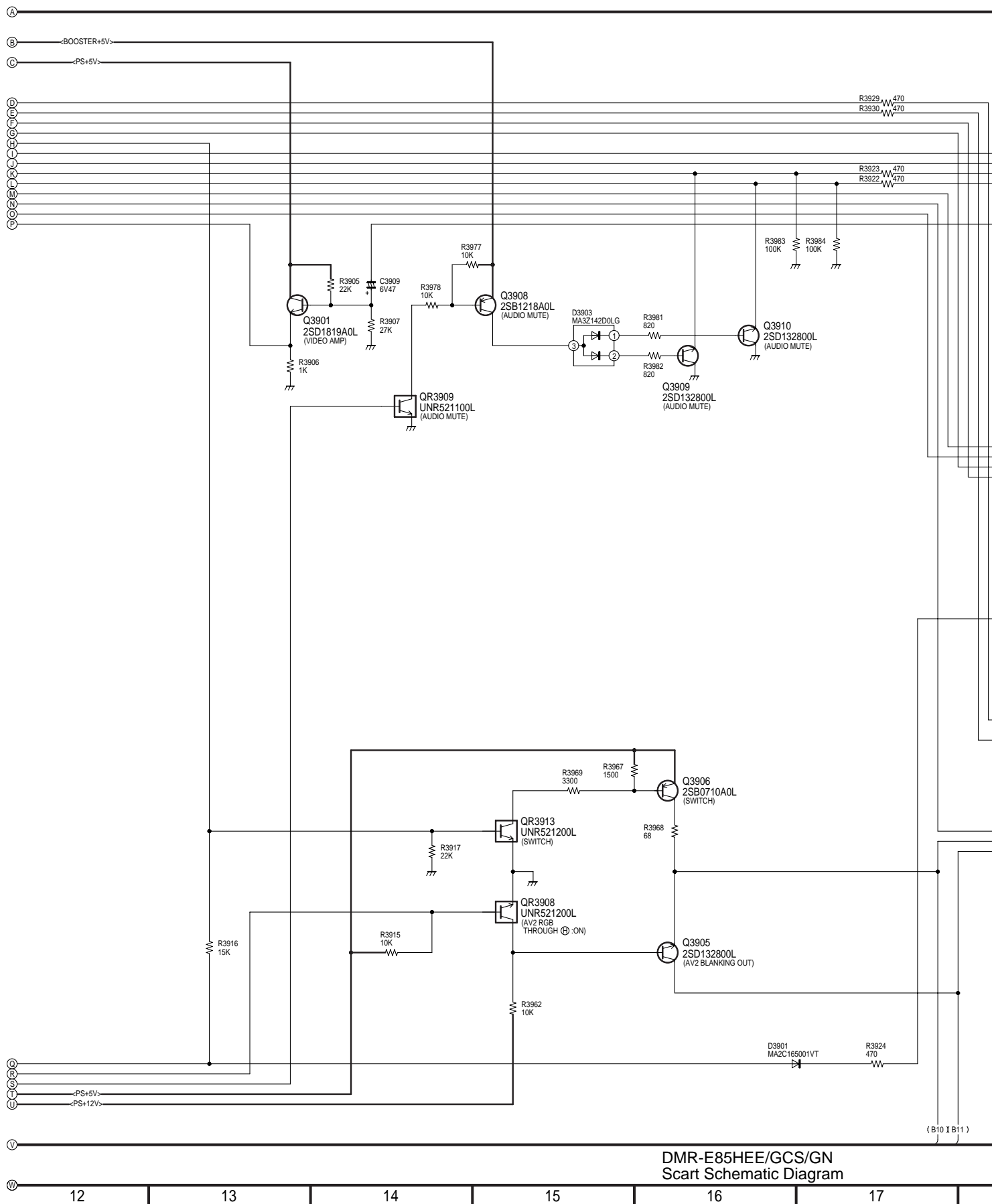
17.14. Nicam Decoder Schematic Diagram

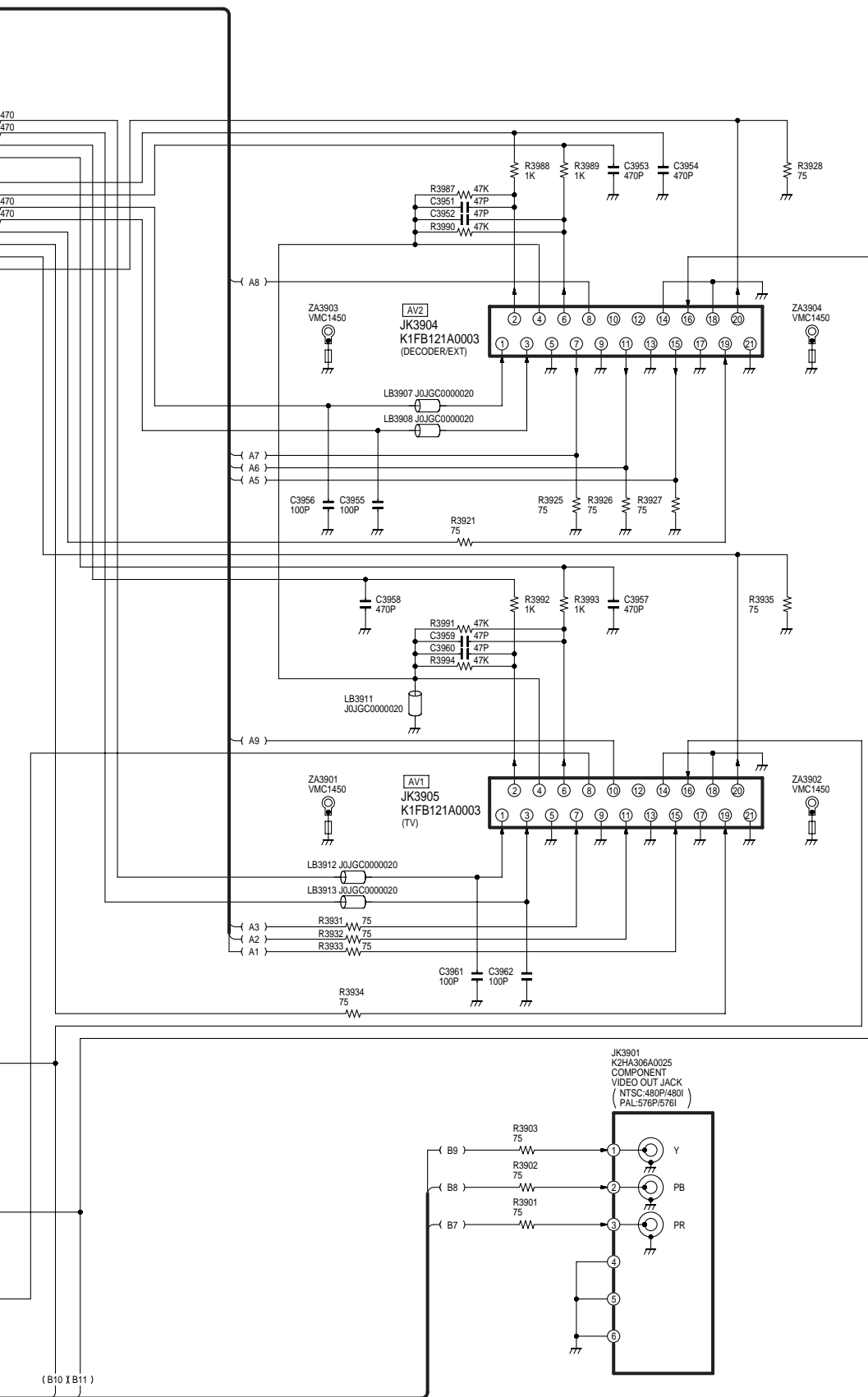












AV2	
1	AUDIO OUT CH2(R)
2	AUDIO IN CH2(R)
3	AUDIO OUT CH1(L)
4	GND(A)
5	GND
6	AUDIO IN CH1(L)
7	BLUE
8	AV2 +12V
9	GND
10	-/CONTROL
11	GREEN
12	-/DATA
13	GND
14	GND
15	RED/C IN
16	BLANKING
17	GND
18	GND
19	VIDEO OUT
20	VIDEO IN/Y IN
21	GND

AV1	
1	AUDIO OUT CH2(R)
2	AUDIO IN CH2(R)
3	AUDIO OUT CH1(L)
4	GND(A)
5	GND
6	AUDIO IN CH1(L)
7	BLUE
8	PB +12V
9	GND
10	-/CONTROL
11	GREEN
12	-/DATA
13	GND
14	GND
15	RED/C OUT
16	BLANKING
17	GND
18	GND
19	VIDEO OUT/Y OUT
20	VIDEO IN
21	GND

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DMR-E85HEE/GCS/GN
Scart Schematic Diagram

18

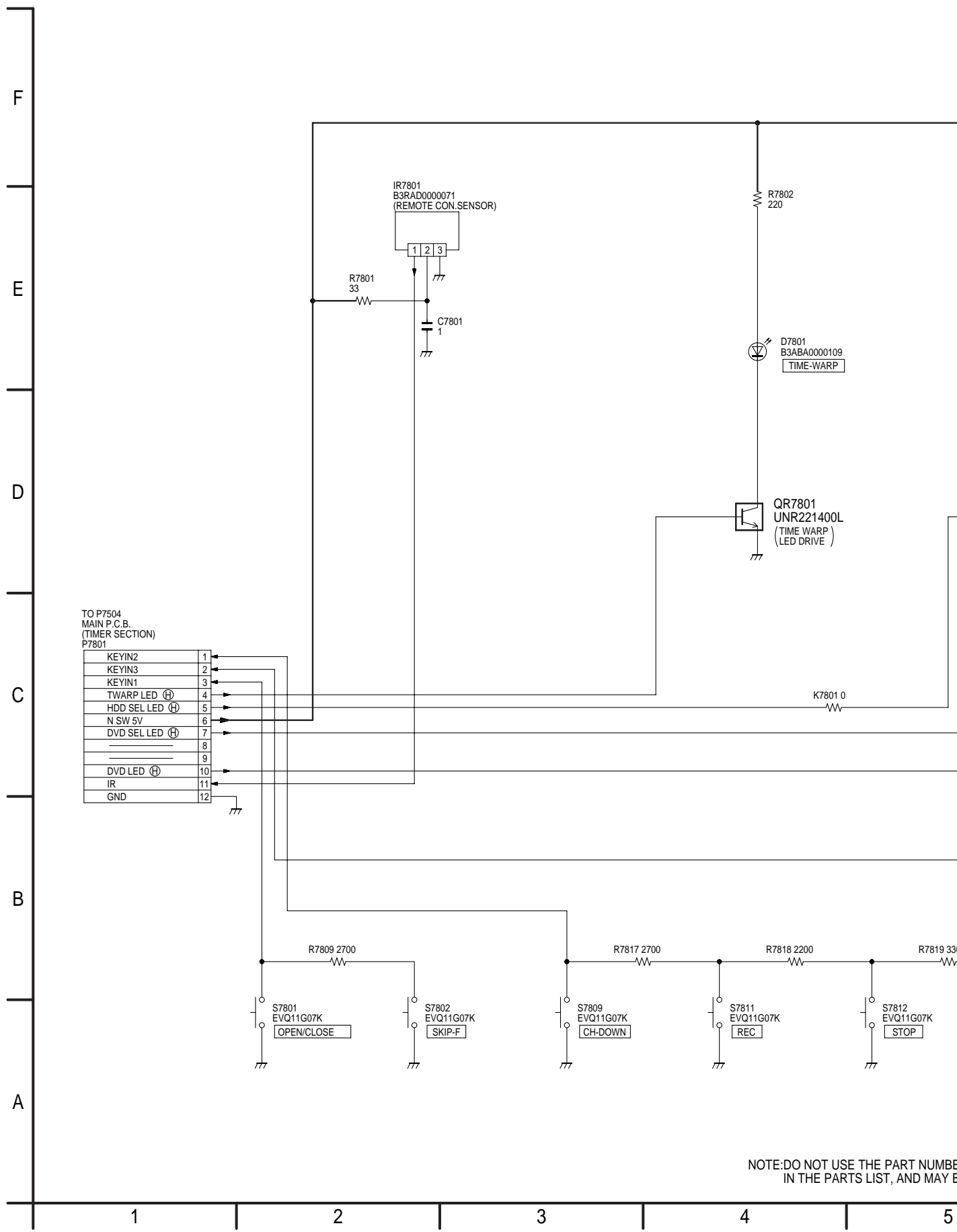
19

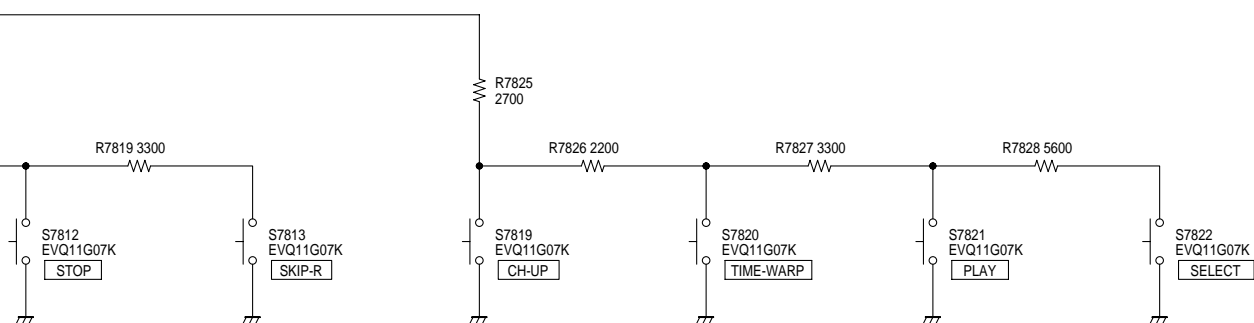
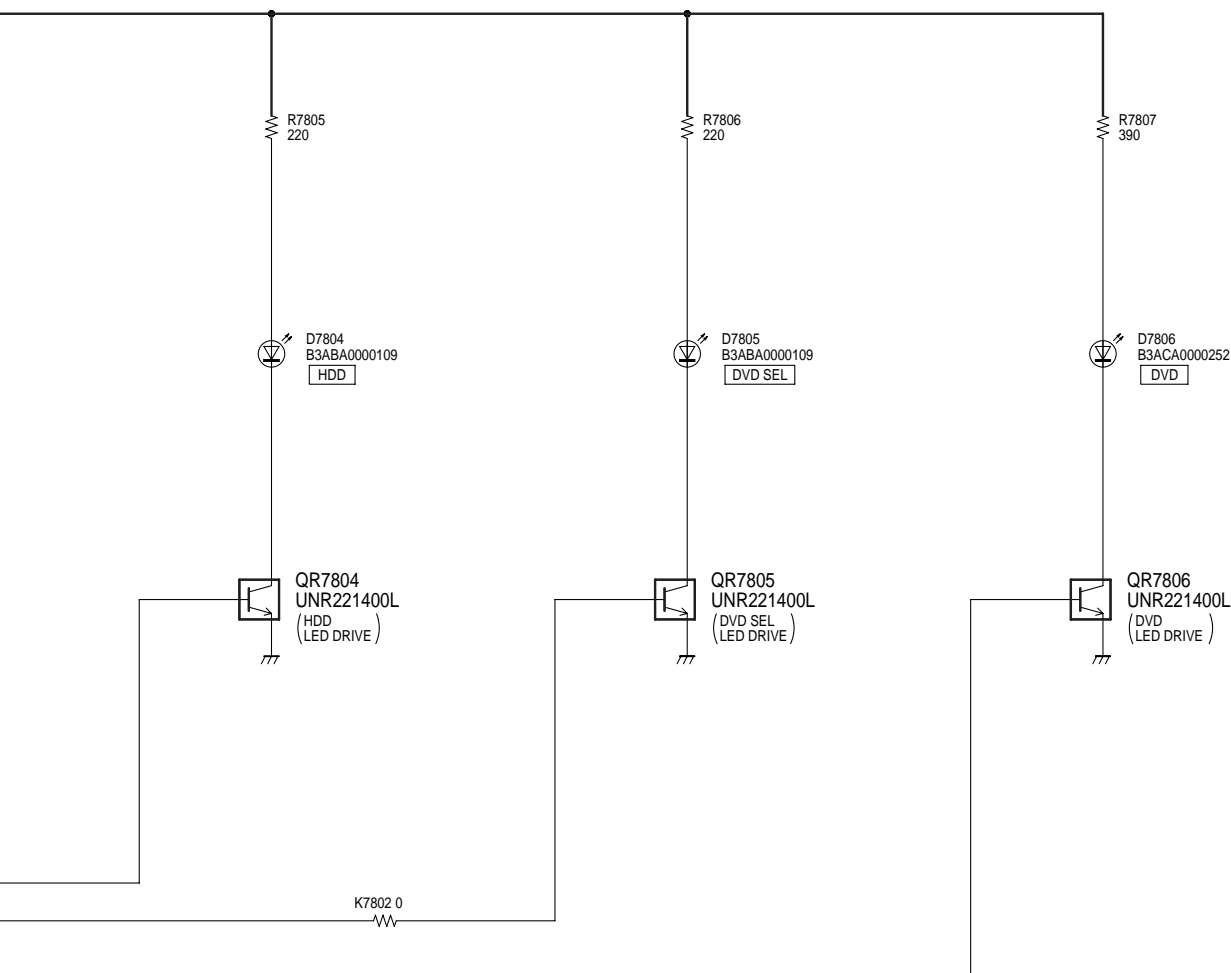
20

21

22

17.16. Front (R) Schematic Diagram





THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN
S LIST, AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DMR-E85HEE/GCS/GN
Front(R) Schematic Diagram

5

6

7

8

9

IC Pin Terminal Chart (TC 1 - TC 8)

TC	IC3404 / AVENC		SIGNAL NAME	IC3402 / SDRAM	
	Port Name	Pin No		Pin No	Port Name
1	ARDQ0	334	MADQB0	2	DQ0
	ARDQ1	335	MADQB1	3	DQ1
	ARDQ2	336	MADQB2	5	DQ2
	ARDQ3	2	MADQB3	6	DQ3
	ARDQ4	4	MADQB4	8	DQ4
	ARDQ5	5	MADQB5	9	DQ5
	ARDQ6	7	MADQB6	11	DQ6
	ARDQ7	9	MADQB7	12	DQ7
	ARDQ8	16	MADQB8	39	DQ8
	ARDQ9	17	MADQB9	40	DQ9
	ARDQ10	19	MADQB10	42	DQ10
	ARDQ11	20	MADQB11	43	DQ11
	ARDQ12	22	MADQB12	45	DQ12
	ARDQ13	23	MADQB13	46	DQ13
	ARDQ14	25	MADQB14	48	DQ14
	ARDQ15	26	MADQB15	49	DQ15
	ARA0	28	MAB0	21	A0
	ARA1	29	MAB1	22	A1
	ARA2	31	MAB2	23	A2
	ARA3	32	MAB3	24	A3
	ARA4	34	MAB4	27	A4
	ARA5	35	MAB5	28	A5
	ARA6	37	MAB6	29	A6
	ARA7	38	MAB7	30	A7
	ARA8	41	MAB8	31	A8
	ARA9	42	MAB9	32	A9
	ARA10	44	MAB10	20	A10
	ARA11	45	BAOS D	19	A11

TC	IC3404 / AV ENC		SIGNAL NAME	IC3408 / SDRAM	
	Port Name	Pin No		Pin No	Port Name
	MDQ0	88	MDQA0	2	DQ0
	MDQ1	89	MDQA1	4	DQ1
	MDQ2	91	MDQA2	5	DQ2
	MDQ3	92	MDQA3	7	DQ3
	MDQ4	93	MDQA4	8	DQ4
	MDQ5	95	MDQA5	10	DQ5
	MDQ6	96	MDQA6	11	DQ6
	MDQ7	97	MDQA7	13	DQ7
	MDQ8	99	MDQA8	74	DQ8
	MDQ9	100	MDQA9	76	DQ9
	MDQ10	101	MDQA10	77	DQ10
	MDQ11	103	MDQA11	79	DQ11
	MDQ12	104	MDQA12	80	DQ12
	MDQ13	105	MDQA13	82	DQ13
	MDQ14	108	MDQA14	83	DQ14
	MDQ15	109	MDQA15	85	DQ15
	MDQ16	115	MDQA16	31	DQ16
	MDQ17	116	MDQA17	33	DQ17
	MDQ18	118	MDQA18	34	DQ18
	MDQ19	119	MDQA19	36	DQ19
	MDQ20	120	MDQA20	37	DQ20
	MDQ21	122	MDQA21	39	DQ21
	MDQ22	123	MDQA22	40	DQ22
	MDQ23	124	MDQA23	42	DQ23
	MDQ24	127	MDQA24	45	DQ24
	MDQ25	128	MDQA25	47	DQ25
	MDQ26	129	MDQA26	48	DQ26
	MDQ27	131	MDQA27	50	DQ27
	MDQ28	132	MDQA28	51	DQ28
	MDQ29	133	MDQA29	53	DQ29
	MDQ30	135	MDQA30	54	DQ30
	MDQ31	136	MDQA31	56	DQ31
2	MA0	147	MAA0	25	A0
	MA1	148	MAA1	26	A1
	MA2	149	MAA2	27	A2
	MA3	152	MAA3	60	A3
	MA4	153	MAA4	61	A4
	MA5	154	MAA5	62	A5
	MA6	156	MAA6	63	A6
	MA7	157	MAA7	64	A7
	MA8	158	MAA8	65	A8
	MA9	160	MAA9	66	A9
	MA10	161	MAA10	24	A10

TC	IC3501 / RTSC		SIGNAL NAME	FP3501 (TO DVD RAM&HDD	
	Port Name	Pin No		Pin No	Port Name
3	IHDD0	251	RAMD0	24	DD0
	IHDD1	250	RAMD1	26	DD1
	IHDD2	249	RAMD2	28	DD2
	IHDD3	248	RAMD3	30	DD3
	IHDD4	246	RAMD4	32	DD4
	IHDD5	245	RAMD5	34	DD5
	IHDD6	244	RAMD6	36	DD6
	IHDD7	243	RAMD7	38	DD7
	IHDD8	239	RAMD8	37	DD8
	IHDD9	238	RAMD9	35	DD9
	IHDD10	237	RAMD10	33	DD10
	IHDD11	236	RAMD11	31	DD11
	IHDD12	235	RAMD12	29	DD12
	IHDD13	233	RAMD13	27	DD13
	IHDD14	232	RAMD14	25	DD14
	IHDD15	231	RAMD15	23	DD15

TC	IC3404 / AVENC		SIGNAL NAME	IC6001 / AV DEC&MAIN CPU	
	Port Name	Pin No		Pin No	Port Name
4	R656OUT0	296	R656ENC0	278	VDIN0
	R656OUT1	297	R656ENC1	277	VDIN1
	R656OUT2	298	R656ENC2	272	VDIN2
	R656OUT3	299	R656ENC3	271	VDIN3
	R656OUT4	301	R656ENC4	270	VDIN4
	R656OUT5	302	R656ENC5	269	VDIN5
	R656OUT6	303	R656ENC6	268	VDIN6
	R656OUT7	304	R656ENC7	266	VDIN7

TC	IC6001/AV DEC&MAIN CPU		SIGNAL NAME	IC3404 / AVENC	
	Port Name	Pin No		Pin No	Port Name
5	VDOOUT0	289	R656DEC0	283	R656IN0
	VDOOUT1	288	R656DEC1	284	R656IN1
	VDOOUT2	286	R656DEC2	285	R656IN2
	VDOOUT3	285	R656DEC3	286	R656IN3
	VDOOUT4	284	R656DEC4	288	R656IN4
	VDOOUT5	283	R656DEC5	289	R656IN5
	VDOOUT6	282	R656DEC6	290	R656IN6
	VDOOUT7	281	R656DEC7	291	R656IN7

TC	IC3501 / RTSC		SIGNAL NAME	IC6001/AV DEC&MAIN CPU	
	Port Name	Pin No		Pin No	Port Name
6	B3DATA0	46	STD0	251	STD0
	B3DATA1	47	STD1	250	STD1
	B3DATA2	48	STD2	249	STD2
	B3DATA3	49	STD3	248	STD3
	B3DATA4	53	STD4	247	STD4
	B3DATA5	54	STD5	245	STD5
	B3DATA6	55	STD6	244	STD6
	B3DATA7	56	STD7	243	STD7

TC	IC3404 / AVENC		SIGNAL NAME	IC3501 / RTSC	
	Port Name	Pin No		Pin No	Port Name
7	CD0	229	ED0	27	B2DATA0
	CD1	230	ED1	28	B2DATA1
	CD2	231	ED2	30	B2DATA2
	CD3	233	ED3	31	B2DATA3
	CD4	234	ED4	33	B2DATA4
	CD5	235	ED5	34	B2DATA5
	CD6	238	ED6	36	B2DATA6
	CD7	239	ED7	37	B2DATA7

TC	IC6701 / GLUE		SIGNAL NAME	IC6703 / DATA STRAGE	
	Port Name	Pin No		Pin No	Port Name
8	ECCD0	67	DE0	29	D0
	ECCD1	70	DE1	30	D1
	ECCD2	69	DE2	31	D2
	ECCD3	68	DE3	32	D3
	ECCD4	71	DE4	41	D4
	ECCD5	74	DE5	42	D5
	ECCD6	73	DE6	43	D6
	ECCD7	72	DE7	44	D7

IC Pin Terminal Chart (TC9 - TC12)

TC	IC6001 / AV DEC&MAIN CPU		SIGNAL NAME	IC50001 / SDRAM	
	Port Name	Pin No		Pin No	Port Name
9	MDQM0	343	DQ0	2	DQ0
	MDQM1	346	DQ1	4	DQ1
	MDQM2	348	DQ2	5	DQ2
	MDQM3	350	DQ3	7	DQ3
	MDQM4	353	DQ4	8	DQ4
	MDQM5	355	DQ5	10	DQ5
	MDQM6	358	DQ6	11	DQ6
	MDQM7	360	DQ7	13	DQ7
	MDQM8	359	DQ8	42	DQ8
	MDQM9	356	DQ9	44	DQ9
	MDQM10	354	DQ10	45	DQ10
	MDQM11	352	DQ11	47	DQ11
	MDQM12	349	DQ12	48	DQ12
	MDQM13	347	DQ13	50	DQ13
	MDQM14	344	DQ14	51	DQ14
	MDQM15	342	DQ15	53	DQ15
	MAM0	317	A0	23	A0
	MAM1	320	A1	24	A1
	MAM2	322	A2	25	A2
	MAM3	328	A3	26	A3
	MAM4	330	A4	29	A4
	MAM5	332	A5	30	A5
	MAM6	331	A6	31	A6
	MAM7	329	A7	32	A7
	MAM8	323	A8	33	A8
	MAM9	321	A9	34	A9
	MAM10	318	A10	22	A10
	MAM11	316	A11	35	A11

TC	IC6001 / AV DEC&MAIN CPU		SIGNAL NAME	IC50002 / SDRAM	
	Port Name	Pin No		Pin No	Port Name
10	MDQM16	292	DQ16	2	DQ0
	MDQM17	295	DQ17	4	DQ1
	MDQM18	297	DQ18	5	DQ2
	MDQM19	299	DQ19	7	DQ3
	MDQM20	302	DQ20	8	DQ4
	MDQM21	304	DQ21	10	DQ5
	MDQM22	308	DQ22	11	DQ6
	MDQM23	310	DQ23	13	DQ7
	MDQM24	309	DQ24	42	DQ8
	MDQM25	305	DQ25	44	DQ9
	MDQM26	303	DQ26	45	DQ10
	MDQM27	301	DQ27	47	DQ11
	MDQM28	298	DQ28	48	DQ12
	MDQM29	296	DQ29	50	DQ13
	MDQM30	293	DQ30	51	DQ14
	MDQM31	291	DQ31	53	DQ15
	MAM0	317	A0	23	A0
	MAM1	320	A1	24	A1
	MAM2	322	A2	25	A2
	MAM3	328	A3	26	A3
	MAM4	330	A4	29	A4
	MAM5	332	A5	30	A5
	MAM6	331	A6	31	A6
	MAM7	329	A7	32	A7
	MAM8	323	A8	33	A8
	MAM9	321	A9	34	A9
	MAM10	318	A10	22	A10
	MAM11	316	A11	35	A11

TC	IC6001 / AV DEC&MAIN CPU		SIGNAL NAME	IC6005,IC6006 / W-MEMORY	
	Port Name	Pin No		Pin No	Port Name
11	MD0	118	MD0	2	DQ0
	MD1	121	MD1	4	DQ1
	MD2	123	MD2	5	DQ2
	MD3	125	MD3	7	DQ3
	MD4	128	MD4	8	DQ4
	MD5	130	MD5	10	DQ5
	MD6	133	MD6	11	DQ6
	MD7	135	MD7	13	DQ7
	MD8	134	MD8	42	DQ8
	MD9	131	MD9	44	DQ9
	MD10	129	MD10	45	DQ10
	MD11	127	MD11	47	DQ11
	MD12	124	MD12	48	DQ12
	MD13	122	MD13	50	DQ13
	MD14	119	MD14	51	DQ14
	MD15	117	MD15	53	DQ15
	MA0	160	MA0	23	A0
	MA1	163	MA1	24	A1
	MA2	165	MA2	25	A2
	MA3	167	MA3	26	A3
	MA4	166	MA4	29	A4
	MA5	164	MA5	30	A5
	MA6	161	MA6	31	A6
	MA7	159	MA7	32	A7
	MA8	156	MA8	33	A8
	MA9	153	MA9	34	A9
	MA10	157	MA10	22	A10
	MA11	151	MA11	35	A11
MA12	147	MA12	36	NC	
MA13	154	MA13	21	A12	
MA14	152	MA14	20	A13	

SA0 - SA25 ADDRESS BUS LINE (TC13, TC14-1, TC15-1, TC17, TC18-1, TC20)

TC	13		14-1		15-1		17		18-1		20	
SIGNAL NAME	IC3404 / AVENC		IC6701 / GLUE		IC6001 / AVDEC&MAIN CPU		IC6004 / BUFFER		IC6003 / LOADER		IC3501 / RTSC	
	Pin No	Port Name	Pin No	Port Name	Pin No	Port Name	Pin No	Port Name	Pin No	Port Name	Pin No	Port Name
SA0	-	-	-	-	28	SA0	-	-	-	-	-	-
SA1	-	-	-	-	27	SA1	2	1A1	25	A0	-	-
SA2	-	-	-	-	26	SA2	4	1A2	24	A1	-	-
SA3	-	-	-	-	25	SA3	6	1A3	23	A2	-	-
SA4	-	-	-	-	24	SA4	8	1A4	22	A3	-	-
SA5	186	HA4	163	ADRL5	22	SA5	-	-	21	A4	75	HADR5
SA6	187	HA5	170	ADRL6	20	SA6	-	-	20	A5	76	HADR6
SA7	188	HA6	168	ADRL7	19	SA7	-	-	19	A6	77	HADR7
SA8	189	HA7	-	-	18	SA8	-	-	18	A7	78	HADR8
SA9	191	HA8	-	-	17	SA9	-	-	8	A8	79	HADR9
SA10	192	HA9	-	-	16	SA10	-	-	7	A9	80	HADR10
SA11	194	HA10	-	-	15	SA11	-	-	6	A10	81	HADR11
SA12	195	HA11	-	-	14	SA12	-	-	5	A11	82	HADR12
SA13	-	-	-	-	12	SA13	-	-	4	A12	85	HADR13
SA14	-	-	-	-	11	SA14	-	-	3	A13	86	HADR14
SA15	-	-	-	-	10	SA15	-	-	2	A14	87	HADR15
SA16	-	-	-	-	9	SA16	-	-	1	A15	89	HADR16
SA17	-	-	-	-	8	SA17	-	-	48	A16	90	HADR17
SA18	-	-	-	-	7	SA18	-	-	17	A17	92	HADR18
SA19	-	-	-	-	6	SA19	-	-	16	A18	93	HADR19
SA20	-	-	-	-	3	SA20	-	-	-	-	94	HADR20
SA21	-	-	-	-	2	SA21	-	-	-	-	95	HADR21
SA22	-	-	174	ADR22	1	SA22	-	-	-	-	-	-
SA23	-	-	171	ADRH0	363	SA23	-	-	-	-	-	-
SA24	-	-	172	ADRH1	362	SA24	-	-	-	-	-	-
SA25	-	-	173	ADRH2	361	SA25	-	-	-	-	-	-

SD16 - SD31 DATA BUS LINE (TC14-2, TC15-2, TC18-2)

TC	14-2		15-2		18-2	
SIGNAL NAME	IC6701 / GLUE		IC6001 / AVDEC&MAIN CPU		IC6003 / LOADER	
	Pin No	Port Name	Pin No	Port Name	Pin No	Port Name
SD16	201	LDTI0	67	SD16	29	I/O0
SD17	200	LDTI1	66	SD17	31	I/O1
SD18	199	LDTI2	65	SD18	33	I/O2
SD19	202	LDTI3	64	SD19	35	I/O3
SD20	197	LDTI4	63	SD20	38	I/O4
SD21	196	LDTI5	62	SD21	40	I/O5
SD22	198	LDTI6	61	SD22	42	I/O6
SD23	195	LDTI7	59	SD23	44	I/O7
SD24	194	LDTI8	58	SD24	30	I/O8
SD25	192	LDTI9	57	SD25	32	I/O9
SD26	191	LDTI10	56	SD26	34	I/O10
SD27	189	LDTI11	55	SD27	36	I/O11
SD28	190	LDTI12	54	SD28	39	I/O12
SD29	188	LDTI13	53	SD29	41	I/O13
SD30	187	LDTI14	51	SD30	43	I/O14
SD31	185	LDTI15	50	SD31	45	I/O15

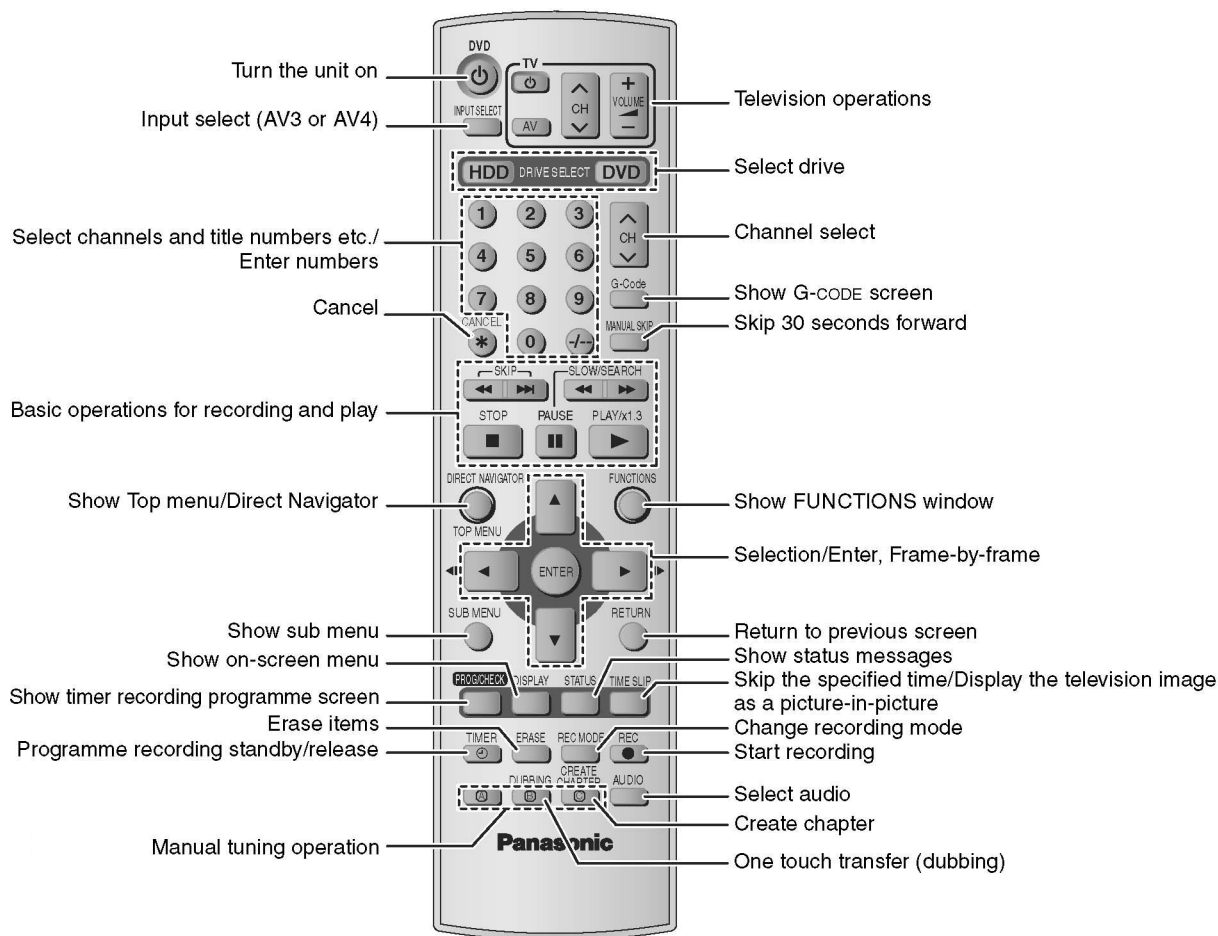
MSD16 - MSD31 DATA BUS LINE (TC19-1, TC21-1,TC22-1)

TC	19-1		21-1		22-1	
SIGNAL NAME	IC3404 / AVENC&RTSC		IC3501 / RTSC		IC6701 / GLUE	
	Pin No	Port Name	Pin No	Port Name	Pin No	Port Name
MSD16	203	HD0	118	HDAT0	12	LDEV0
MSD17	204	HD1	117	HDAT1	13	LDEV1
MSD18	206	HD2	115	HDAT2	11	LDEV2
MSD19	207	HD3	114	HDAT3	10	LDEV3
MSD20	209	HD4	113	HDAT4	7	LDEV4
MSD21	210	HD5	111	HDAT5	8	LDEV5
MSD22	212	HD6	110	HDAT6	9	LDEV6
MSD23	213	HD7	109	HDAT7	14	LDEV7
MSD24	215	HD8	107	HDAT8	2	LDEV8
MSD25	216	HD9	106	HDAT9	4	LDEV9
MSD26	217	HD10	104	HDAT10	3	LDEV10
MSD27	218	HD11	102	HDAT11	208	LDEV11
MSD28	220	HD12	101	HDAT12	207	LDEV12
MSD29	221	HD13	100	HDAT13	6	LDEV13
MSD30	223	HD14	98	HDAT14	205	LDEV14
MSD31	224	HD15	97	HDAT15	203	LDEV15

MSA1 - MSA4 ADDRESS BUS LINE (TC16, TC19-2, TC21-2, TC22-2)

TC	16		19-2		21-2		22-2	
SIGNAL NAME	IC6004/BUFFER		IC3404/AVENC		IC3501/RTSC		IC6701/GLUE	
	Pin No	Port Name	Pin No	Port Name	Pin No	Port Name	Pin No	Port Name
MSA1	18	1Y1	181	HA0	68	HADR1	167	ADRL1
MSA2	16	1Y2	182	HA1	69	HADR2	164	ADRL2
MSA3	14	1Y3	183	HA2	70	HADR3	165	ADRL3
MSA4	12	1Y4	184	HA3	71	HADR4	166	ADRL4

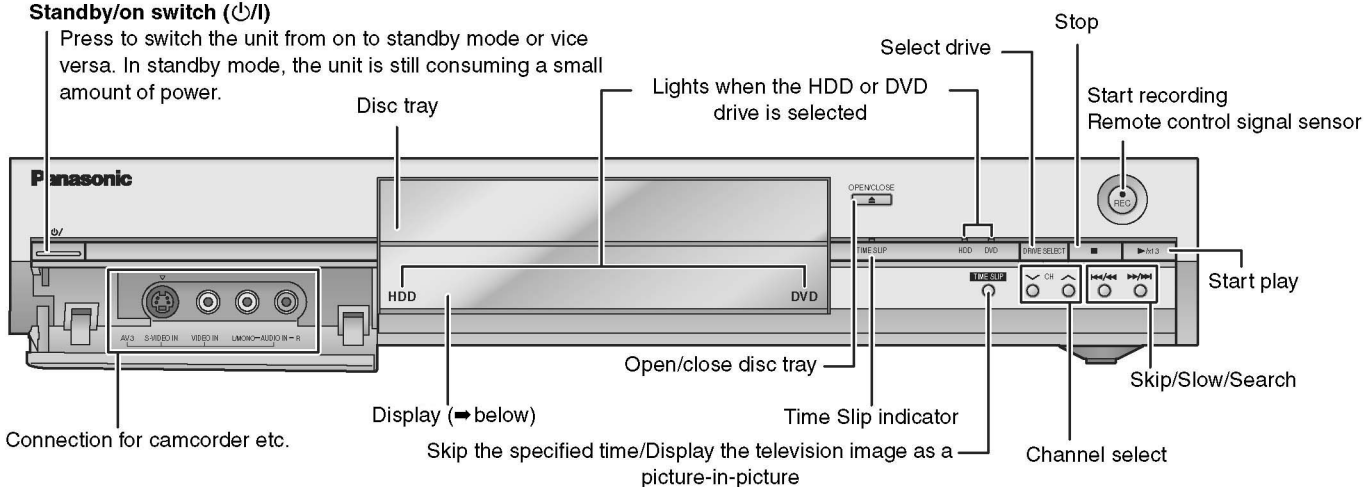
Remote control



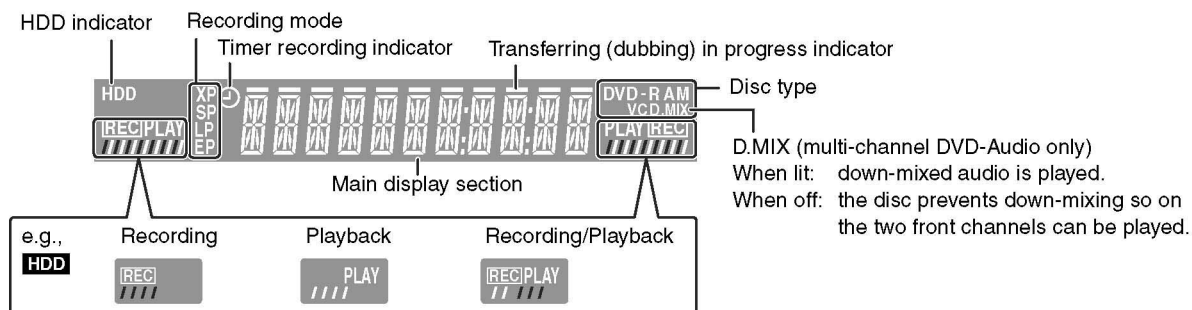
Main unit

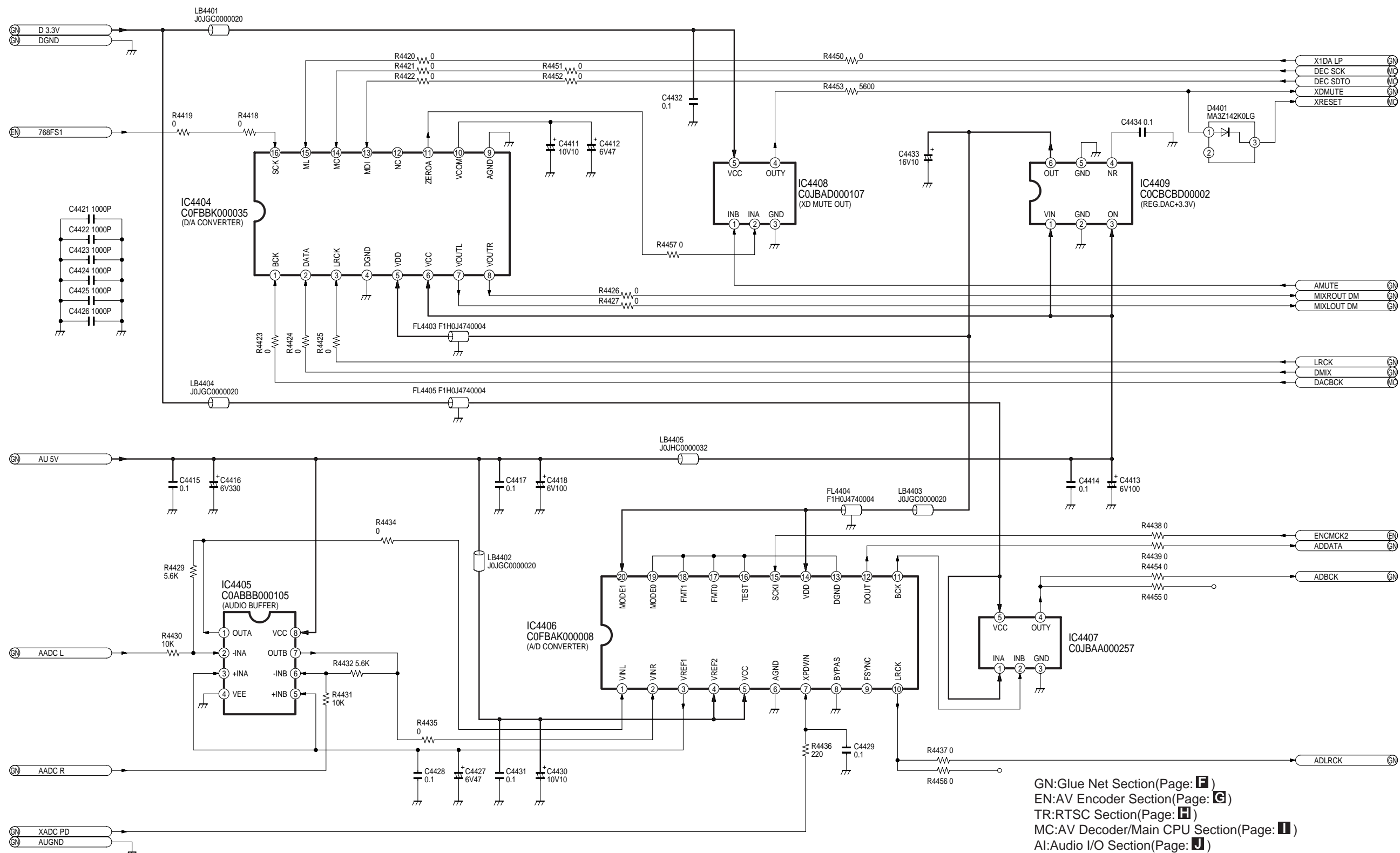
Standby/on switch (⏻/I)

Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.



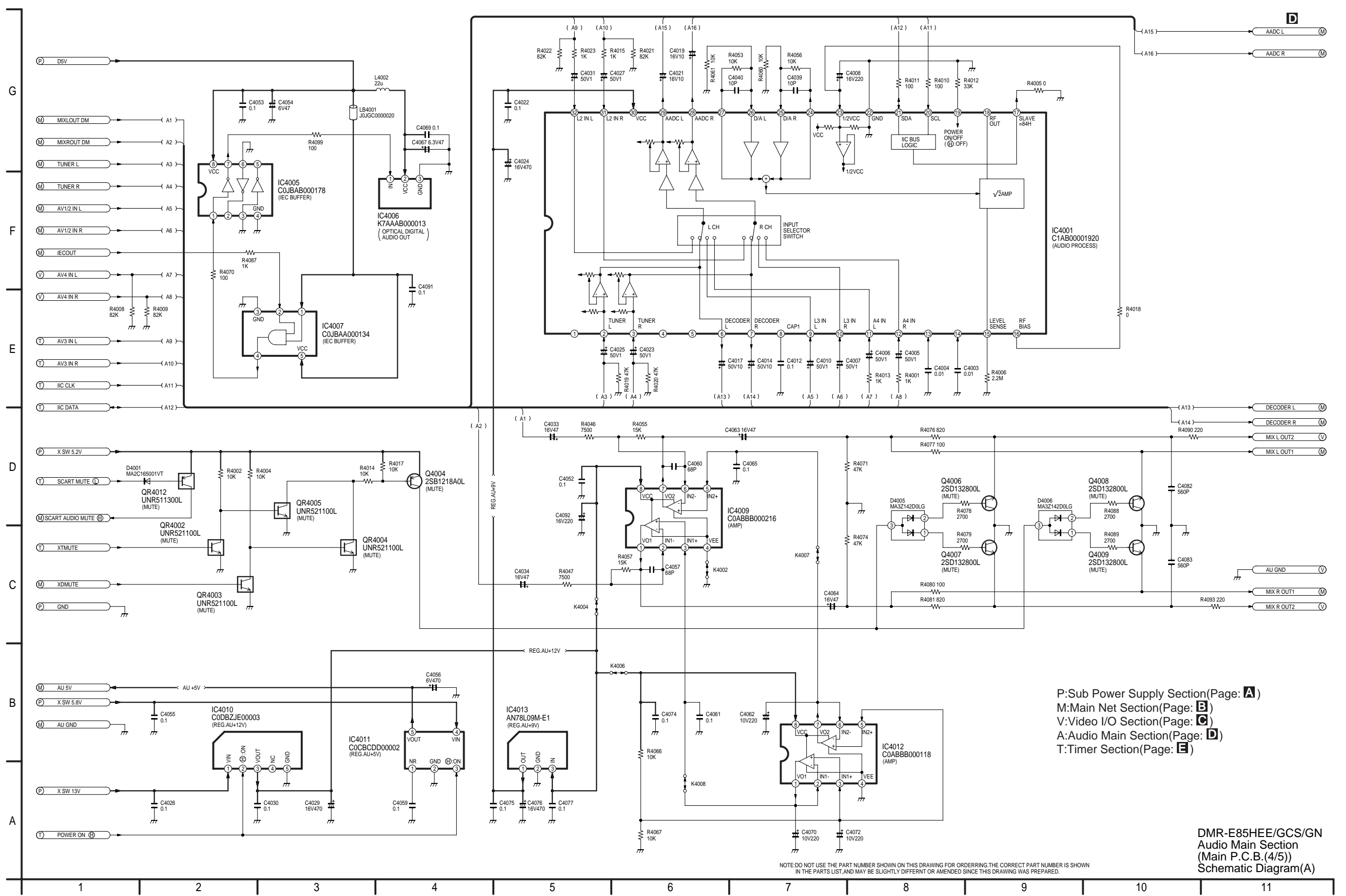
The unit's display





NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

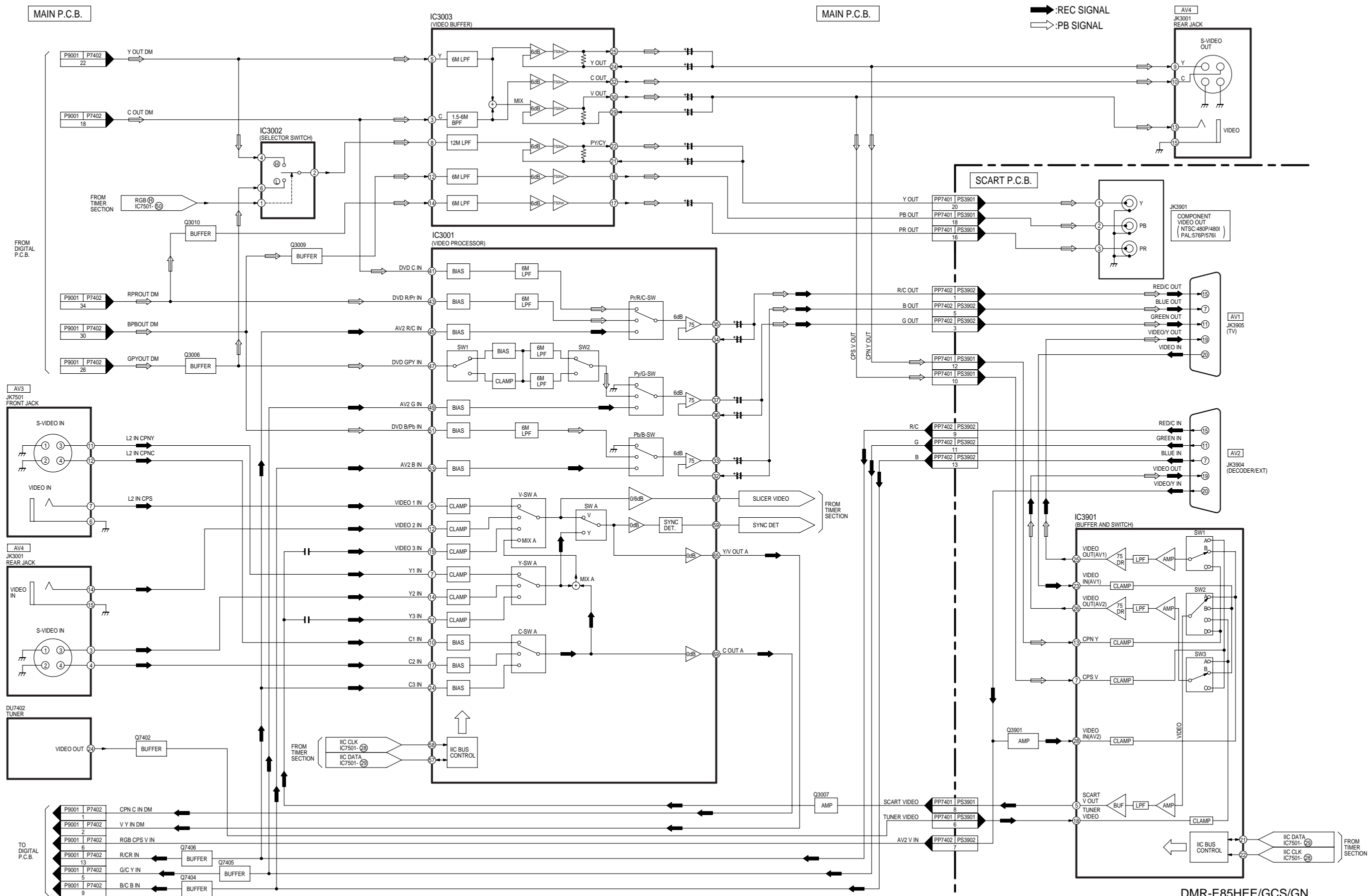
DMR-E85HEE/GCS/GN
 Audio I/O Section
 (Digital P.C.B.(5/5))
 Schematic Diagram(AI)



P:Sub Power Supply Section(Page: **A**)
M:Main Net Section(Page: **B**)
V:Video I/O Section(Page: **C**)
A:Audio Main Section(Page: **D**)
T:Timer Section(Page: **E**)

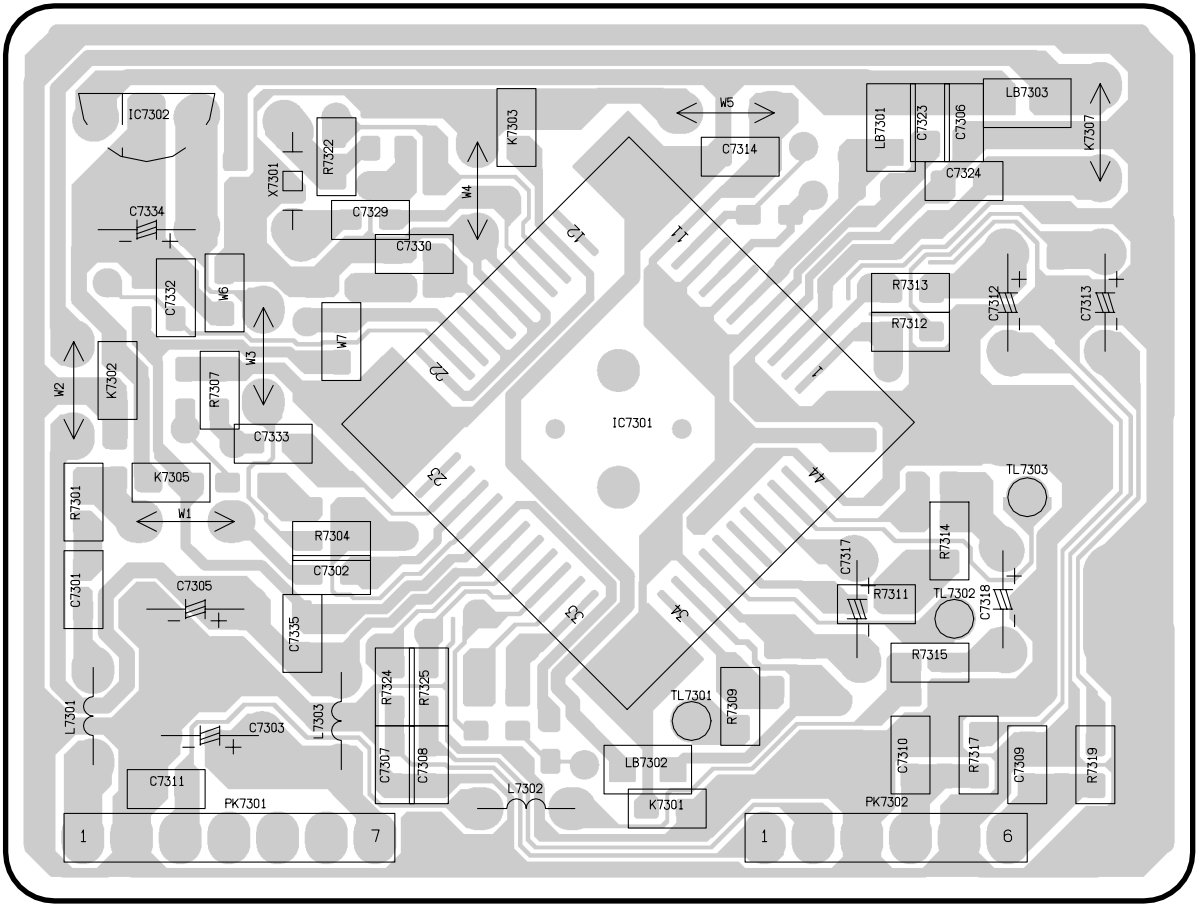
DMR-E85HEE/GCS/GN
Audio Main Section
(Main P.C.B.(4/5))
Schematic Diagram(A)

NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST,AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.



DMR-E85HEE/GCS/GN Analog Video Block Diagram

Nicam Decoder P.C.B.



F

E

D

C

B

A

TO PK7701
MAIN P.C.B.
(MAIN NET)
PK7301

SIF	1
GND	2
TU AUDIO IN	3
	4
	5
	6
JC 5V	7

TO PK7702
MAIN P.C.B.
(MAIN NET)
PK7302

SCL	1
SDA	2
	3
DECODER AUDIO(R)	4
GND	5
DECODER AUDIO(L)	6

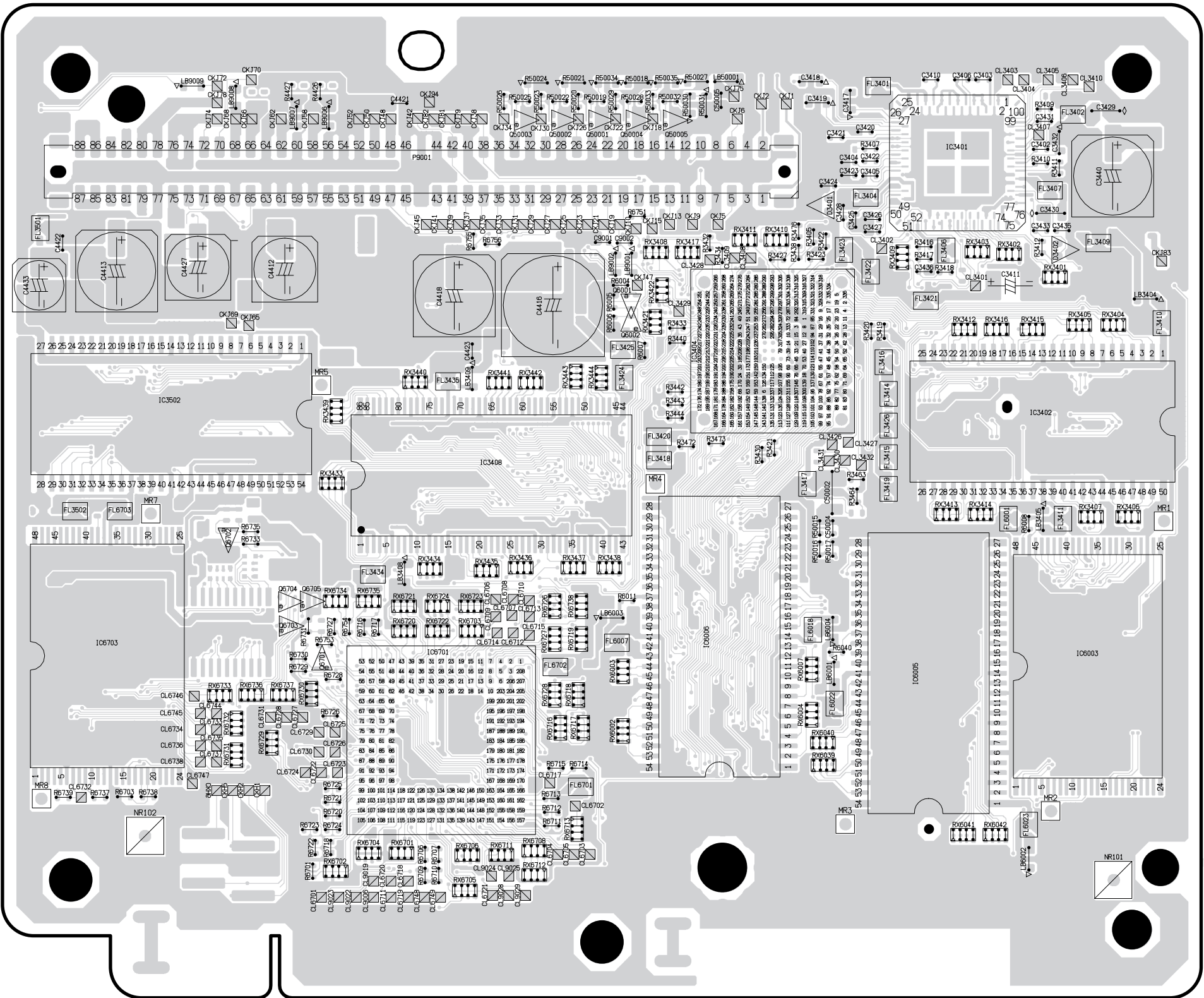
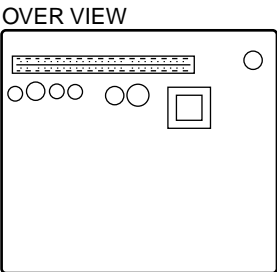
IC7302
C0EAH0000051
(RESET)

IC7301
C1AB00001404(NICAM/A2)

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM
FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

DMR-E85HEE/GCS/GN
Nicom Decoder Schematic Diagram

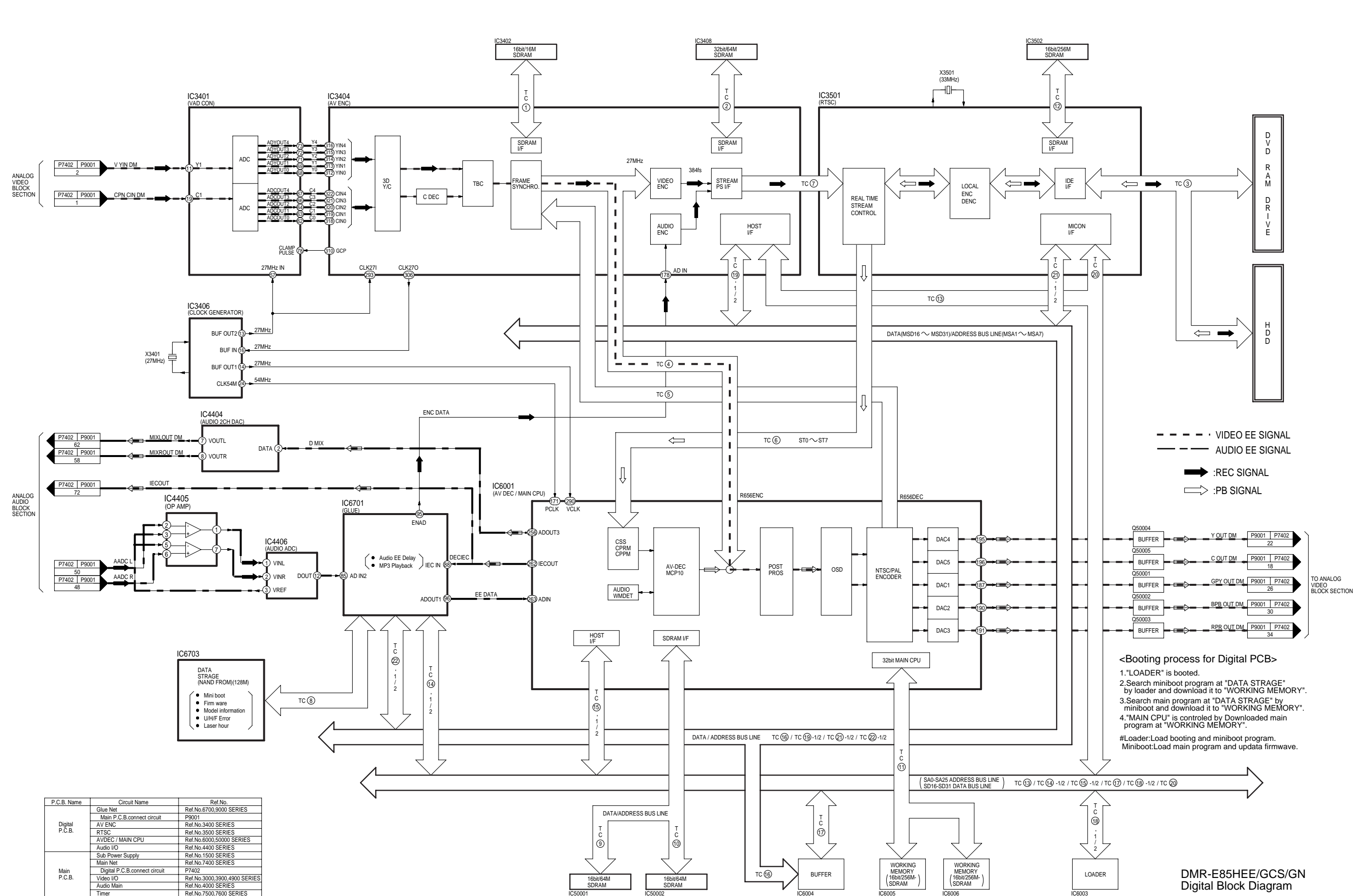
ADDRESS INFORMATION
C.....COMPONENT SIDE
F.....FOIL SIDE



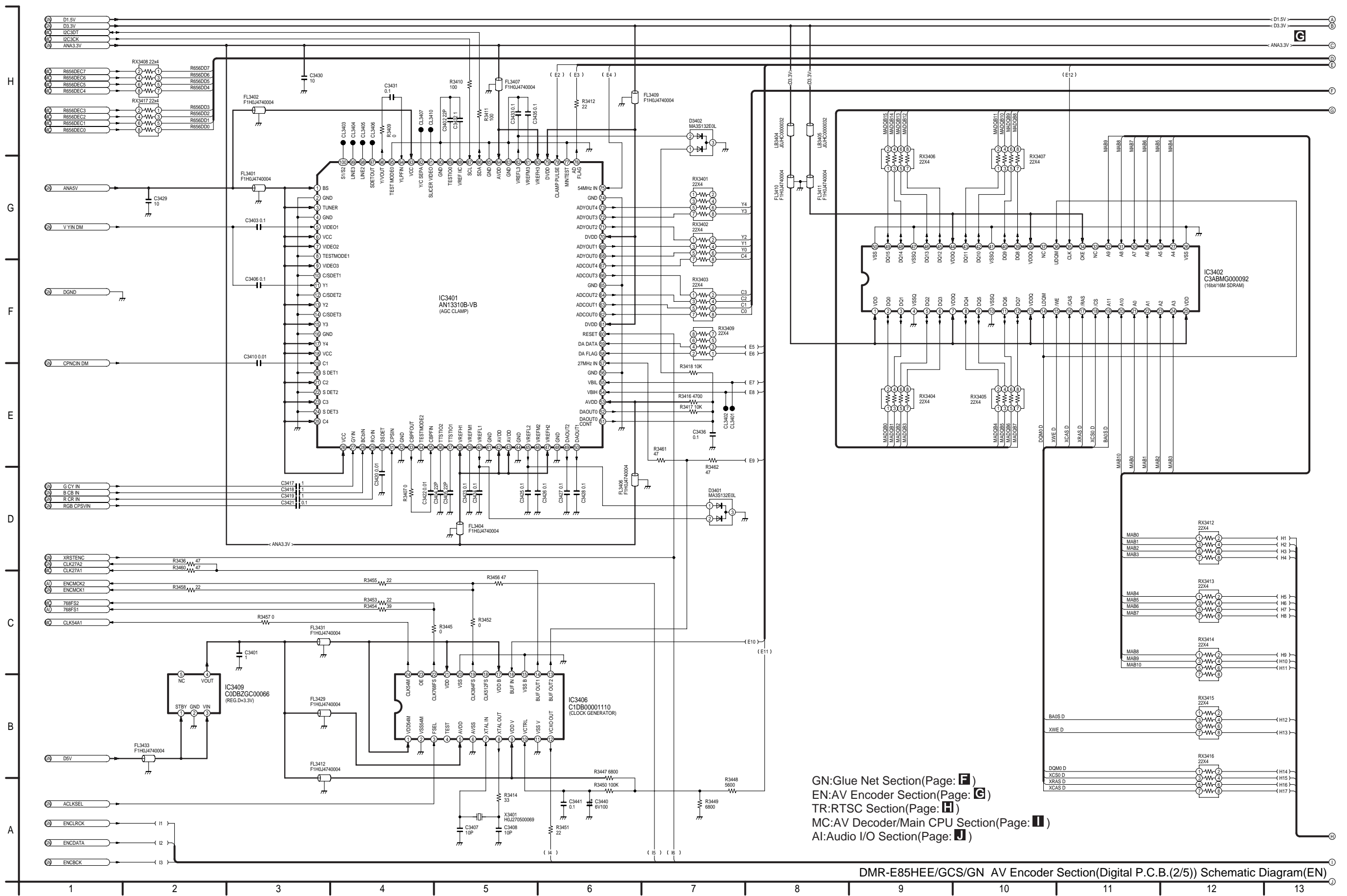
(Component Side)

DMR-E85HEE/GCS/GN
Digital P.C.B. (Component Side)
RfKBE85HEE: E85HEE / RfKBE85HGCS: E85HGCS / RfKBE85HGN: E85HGN

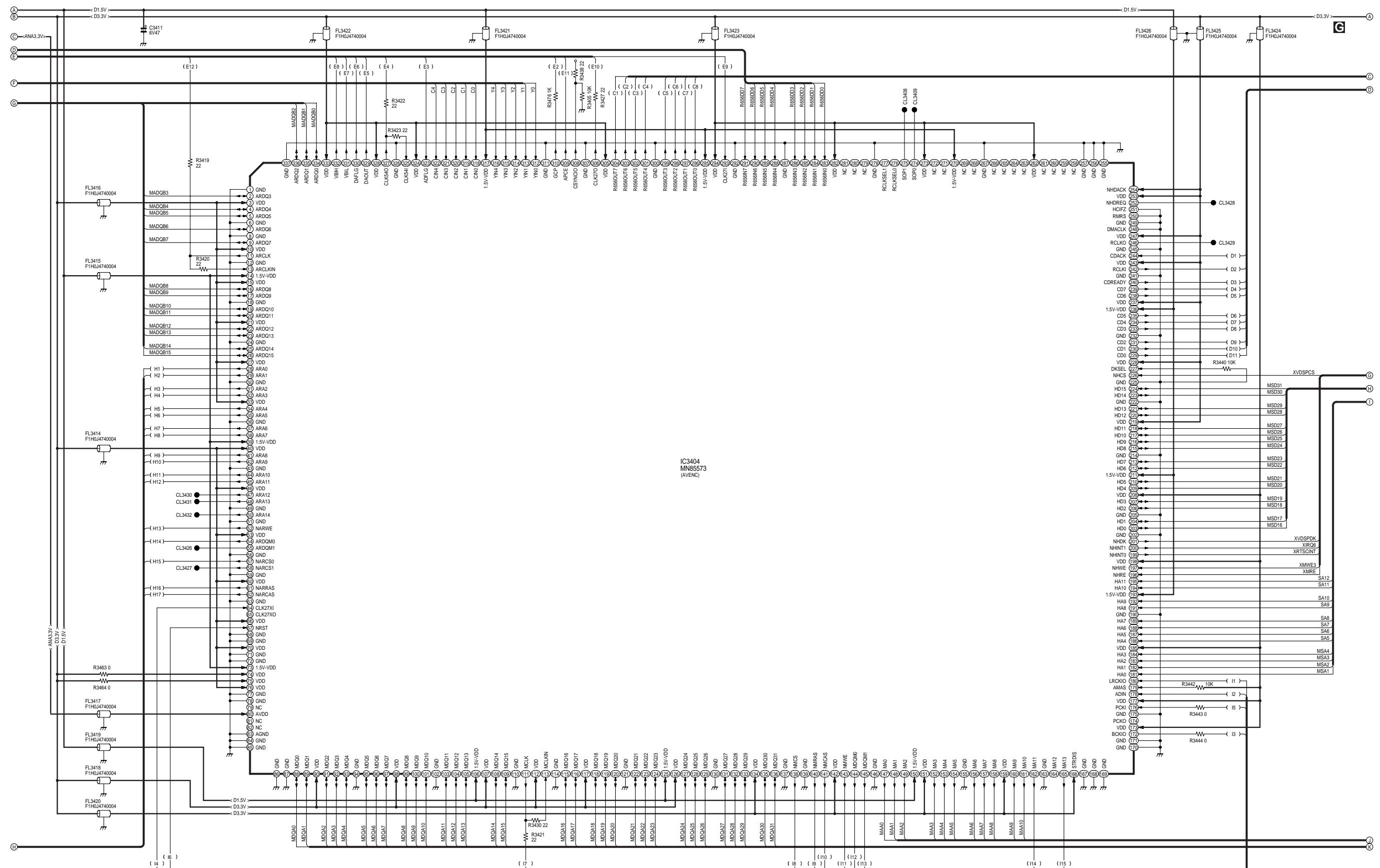
DMR-E85HEE/GCS/GN
Digital P.C.B. (Foil Side)
RFKBE85HEE: E85HEE / RFKBE85HGCS: E85HGCS / RFKBE85HGN: E85HGN



DMR-E85HEE/GCS/GN
Digital Block Diagram

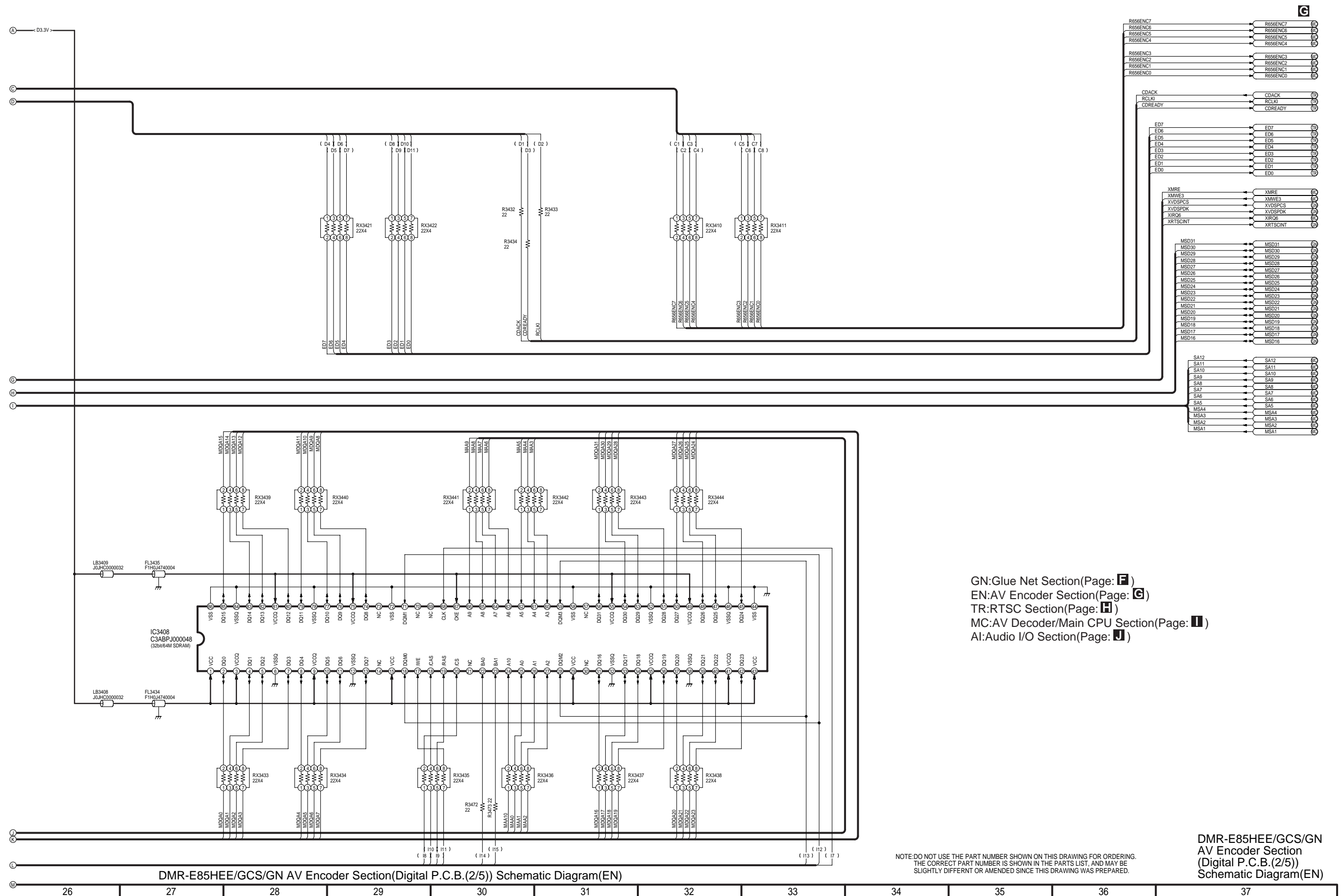


GN:Glue Net Section(Page: **F**)
EN:AV Encoder Section(Page: **G**)
TR:RTSC Section(Page: **H**)
MC:AV Decoder/Main CPU Section(Page: **I**)
AI:Audio I/O Section(Page: **J**)

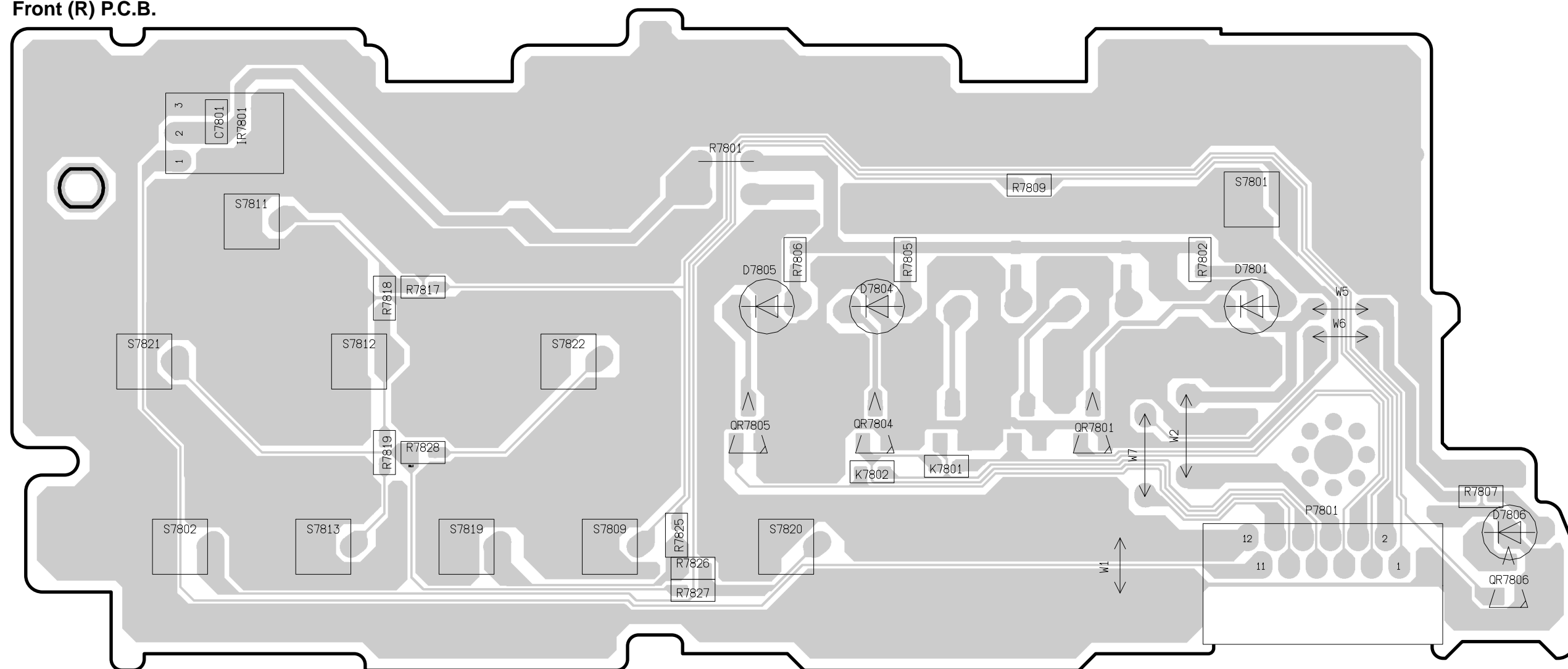


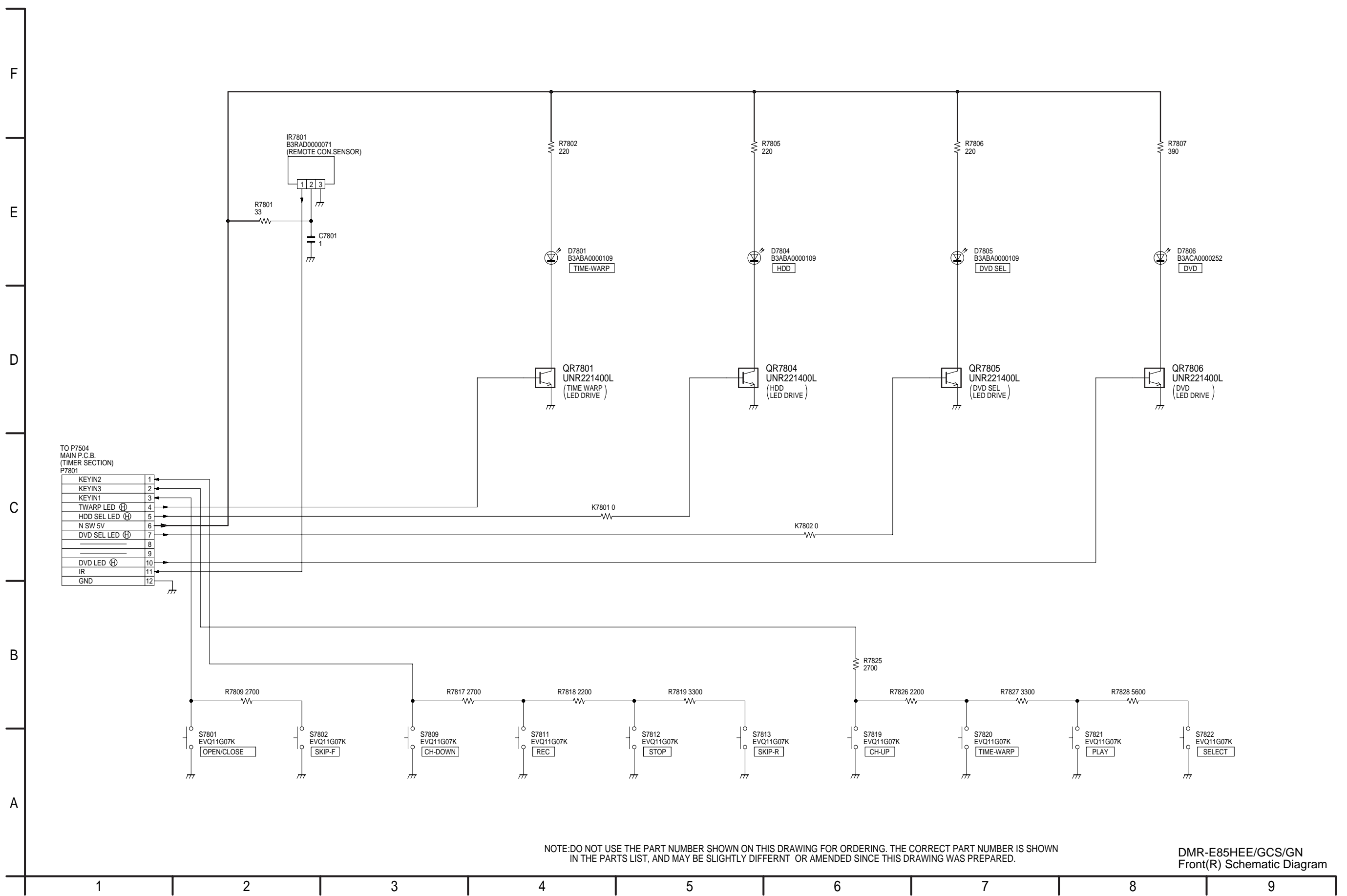
DMR-E85HEE/GCS/GN AV Encoder Section(Digital P.C.B.(2/5)) Schematic Diagram(EN)

DMR-E85HEE/GCS/GN AV Encoder Section(Digital P.C.B.(2/5)) Schematic Diagram(EN)



Front (R) P.C.B.

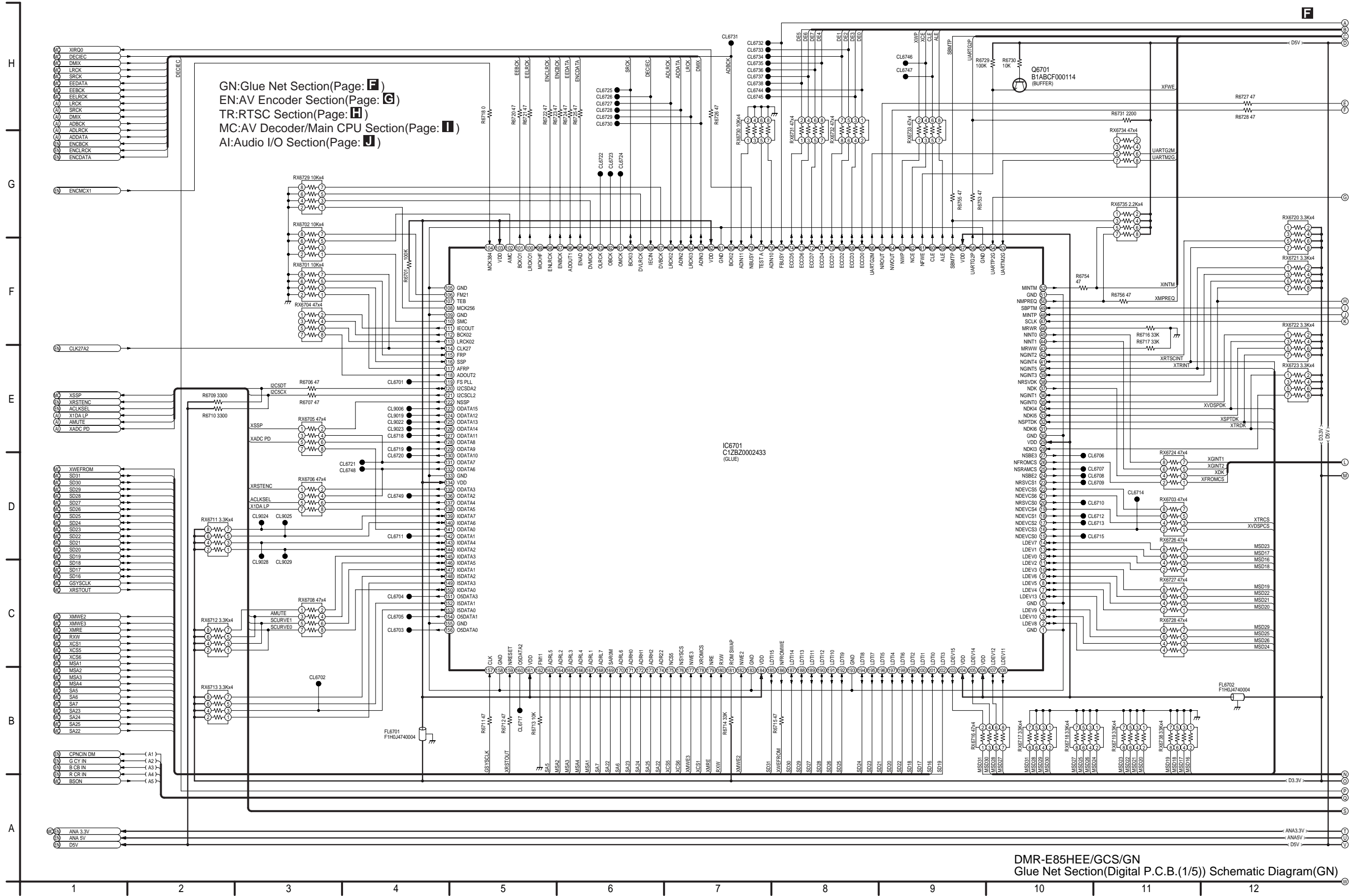




NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DMR-E85HEE/GCS/GN
Front(R) Schematic Diagram

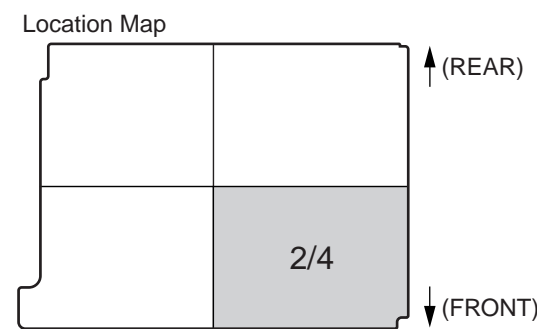
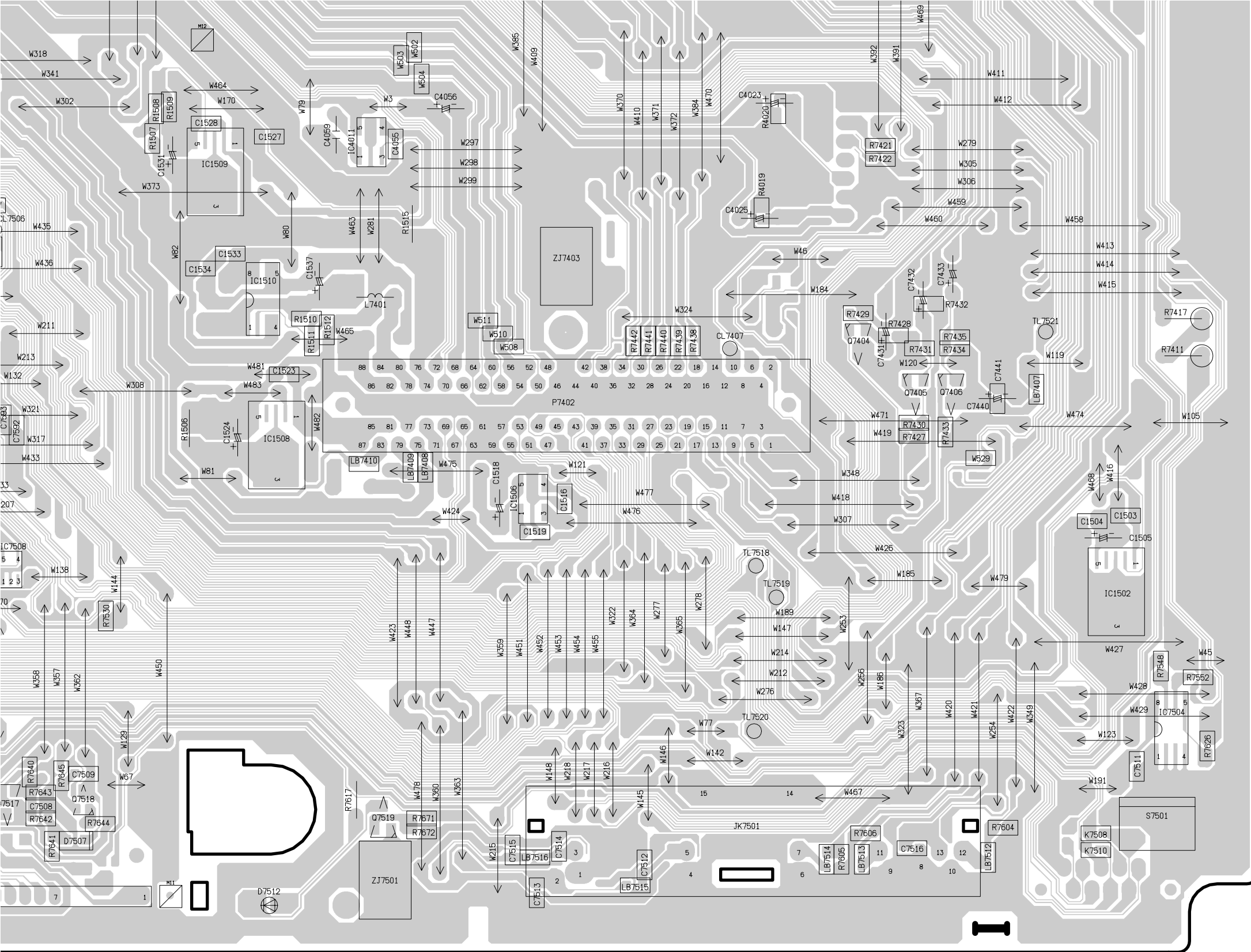
Ref No. MODE	QR7801		
	E	C	B
REC	0	3.5	0
PLAY	0	3.5	0
STOP	0	3.5	0



DMR-E85HEE/GCS/GN
Glue Net Section(Digital P.C.B.(1/5)) Schematic Diagram(GN)

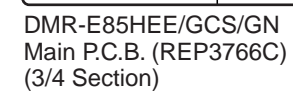


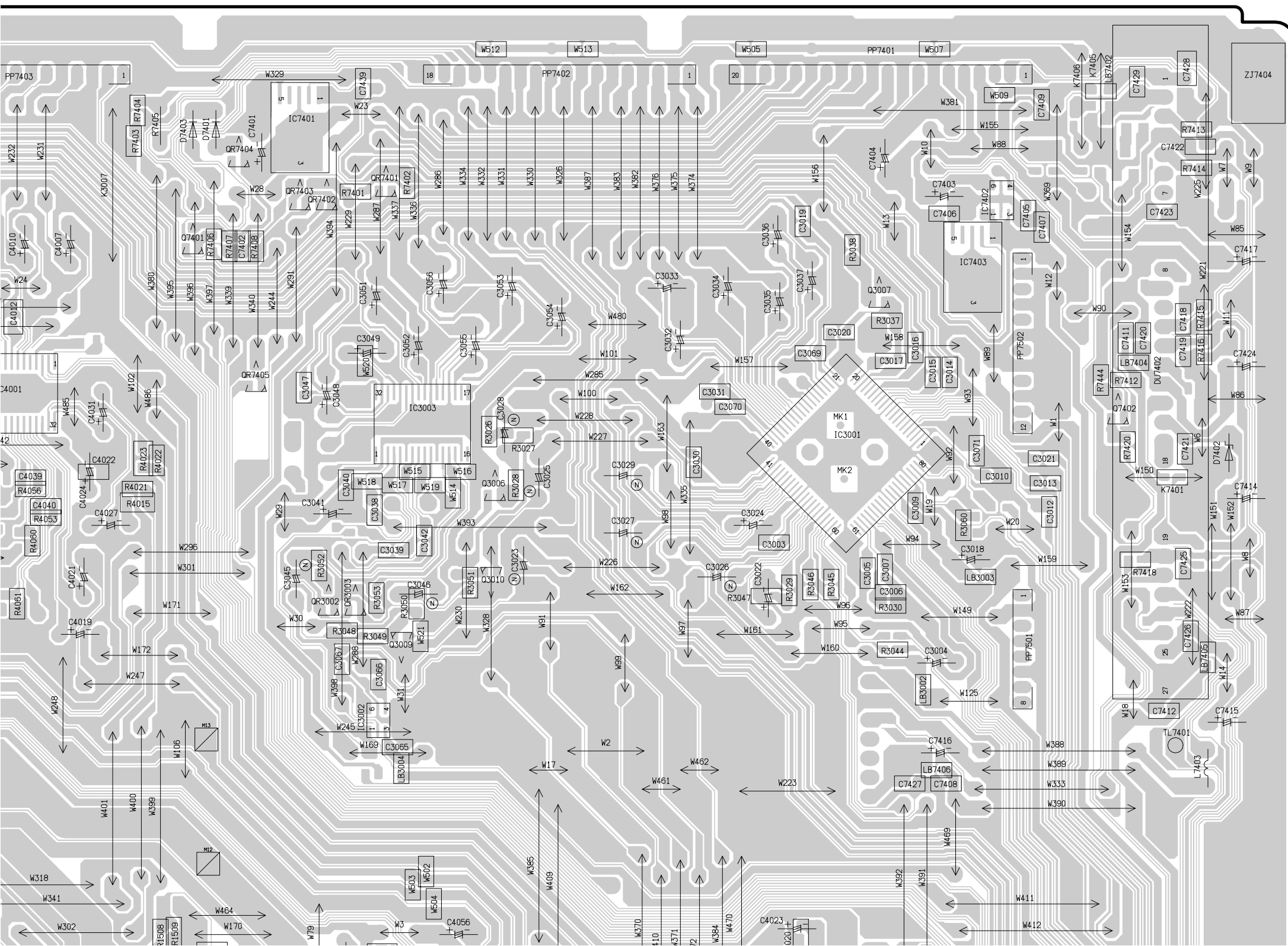
MAIN P.C.B.																			
Integrated Circuit		QR7502	C-2	LB1504	B-1	C3015	E-7	C4027	E-5	C7507	C-1	C7637	E-1	R4057	D-3	R7530	B-5	R7608	C-4
IC1502	B-8	QR7503	A-2	LB1505	B-1	C3016	E-7	C4029	E-2	C7508	A-4	C7639	D-1	R4060	E-4	R7531	B-4	R7610	C-2
IC1505	C-2	Test Point		LB3002	D-7	C3017	E-7	C4030	E-2	C7509	A-4	C7646	C-3	R4061	D-4	R7532	B-4	R7611	B-4
IC1506	B-6	CL7407	C-6	LB3003	D-7	C3018	D-7	C4031	E-5	C7511	A-8	C7650	C-3	R4066	E-2	R7533	B-4	R7612	C-4
IC1507	C-2	CL7502	D-2	LB3004	D-5	C3019	E-7	C4033	E-3	C7512	A-6	C7652	B-3	R4067	E-2	R7534	B-3	R7613	B-4
IC1508	B-5	CL7503	C-4	LB3005	F-2	C3020	E-7	C4034	E-3	C7513	A-6	Resistor		R4070	E-2	R7535	B-3	R7617	A-5
IC1509	C-5	CL7505	C-4	LB3006	F-2	C3021	E-4	C4039	E-4	C7514	A-6	R1501	B-2	R4071	E-3	R7536	B-4	R7619	C-2
IC1510	C-5	CL7506	C-4	LB3007	F-2	C3022	D-7	C4040	E-4	C7515	A-6	R1502	B-2	R4074	D-3	R7537	A-1	R7620	B-4
IC3001	E-7	CL7507	C-4	LB3008	F-2	C3023	D-6	C4052	E-3	C7516	A-7	R1503	B-2	R4076	E-3	R7538	B-4	R7621	C-4
IC3002	D-5	CL7508	D-2	LB4001	E-2	C3024	E-6	C4053	F-2	C7517	C-4	R1504	C-2	R4077	E-3	R7539	B-3	R7625	B-3
IC3003	E-5	TL7401	D-8	LB7402	F-8	C3025	E-6	C4054	F-2	C7525	B-3	R1506	B-5	R4078	F-2	R7540	B-4	R7626	A-8
IC4001	E-4	TL7501	A-4	LB7404	E-8	C3026	D-6	C4055	C-5	C7526	A-3	R1507	C-5	R4079	F-2	R7541	B-4	R7627	C-3
IC4005	F-2	TL7502	A-2	LB7405	D-8	C3027	E-6	C4056	C-6	C7527	A-2	R1508	C-5	R4080	D-3	R7542	B-4	R7628	C-3
IC4006	F-2	TL7503	C-4	LB7406	D-7	C3028	E-6	C4057	D-3	C7528	A-3	R1509	C-5	R4081	D-3	R7543	B-4	R7629	C-3
IC4007	E-2	TL7504	C-4	LB7407	B-7	C3029	E-6	C4059	C-5	C7529	A-3	R1510	C-5	R4087	E-2	R7544	B-4	R7630	C-2
IC4009	E-3	TL7505	B-2	LB7408	B-6	C3030	E-6	C4060	E-3	C7546	B-4	R1511	C-5	R4088	D-3	R7545	B-4	R7631	C-2
IC4010	E-2	TL7507	C-3	LB7409	B-5	C3031	E-6	C4061	E-3	C7550	A-2	R1512	C-5	R4089	D-4	R7546	B-4	R7632	C-3
IC4011	C-5	TL7508	A-3	LB7410	B-5	C3032	E-6	C4062	E-2	C7551	A-1	R1515	C-5	R4090	F-2	R7547	B-4	R7633	B-3
IC4012	E-2	TL7518	B-7	LB7501	A-2	C3033	E-6	C4063	E-3	C7552	B-2	R1516	B-2	R4093	F-2	R7548	B-8	R7634	B-3
IC4013	E-2	TL7519	B-7	LB7502	A-2	C3034	E-6	C4064	D-3	C7555	A-1	R3026	E-6	R4099	F-2	R7549	C-4	R7635	C-4
IC7401	F-5	TL7520	A-7	LB7503	B-2	C3035	E-7	C4065	E-3	C7556	A-1	R3027	E-6	R7401	F-5	R7550	C-4	R7636	C-2
IC7402	F-7	TL7521	C-7	LB7504	A-4	C3036	E-7	C4067	F-2	C7558	A-1	R3028	E-6	R7402	F-5	R7551	C-4	R7637	C-3
IC7403	E-7	TL7522	D-3	LB7506	B-4	C3037	E-7	C4069	F-2	C7559	B-2	R3029	D-7	R7403	F-5	R7552	B-8	R7638	A-4
IC7501	C-3	TL7523	C-2	LB7507	B-4	C3038	E-5	C4070	E-2	C7560	B-1	R3030	D-7	R7404	F-5	R7553	C-4	R7639	A-4
IC7502	A-3	TL7525	B-3	LB7508	C-4	C3039	E-5	C4072	E-2	C7562	A-4	R3037	E-7	R7405	F-5	R7554	C-4	R7640	A-4
IC7503	C-2	TL7526	B-4	LB7509	C-3	C3040	E-5	C4074	E-2	C7563	A-4	R3038	E-7	R7406	E-5	R7556	C-4	R7641	A-4
IC7504	A-8	TW7501	B-1	LB7510	B-2	C3041	E-5	C4075	E-2	C7565	A-3	R3044	D-7	R7407	E-5	R7557	C-4	R7642	A-4
IC7505	C-2	Connector		LB7511	B-2	C3042	E-5	C4076	E-2	C7566	A-4	R3045	D-7	R7408	E-5	R7558	C-4	R7643	A-4
IC7506	E-1	JK3001	F-3	LB7512	A-7	C3045	D-5	C4077	E-2	C7567	A-4	R3046	D-7	R7411	C-8	R7559	C-4	R7644	A-5
IC7508	B-4	JK7501	A-7	LB7513	A-7	C3046	D-5	C4082	F-2	C7568	A-4	R3047	D-7	R7412	E-8	R7561	C-4	R7645	A-4
Transistor		P1501	C-2	LB7514	A-7	C3047	E-5	C4083	D-3	C7569	A-4	R3048	D-5	R7413	F-8	R7562	C-2	R7646	B-3
Q3006	E-6	P1502	C-1	LB7515	A-6	C3048	E-5	C4091	E-2	C7580	B-4	R3049	D-5	R7414	F-8	R7563	C-2	R7647	B-3
Q3007	E-7	P7402	B-6	LB7516	A-6	C3049	E-5	C4092	E-3	C7581	B-4	R3050	D-5	R7415	E-8	R7564	C-2	R7671	A-6
Q3009	D-5	P7503	E-1	Capacitor		C3051	E-5	C7401	F-5	C7582	B-3	R3051	D-6	R7416	E-8	R7567	C-3	R7672	A-6
Q3010	D-6	P7504	A-1	C1503	B-8	C3052	E-5	C7402	E-5	C7583	B-3	R3052	D-5	R7417	C-8	R7569	C-3	K7401	E-8
Q4004	D-2	PP7401	F-7	C1504	B-8	C3053	E-6	C7403	F-7	C7584	B-4	R3053	D-5	R7418	E-8	R7571	C-2	K7508	A-8
Q4006	F-2	PP7402	F-6	C1505	B-8	C3054	E-6	C7404	F-7	C7585	B-4	R3054	F-3	R7420	E-8	R7572	B-2	K7510	A-8
Q4007	F-2	PP7403	F-4	C1512	B-2	C3055	E-6	C7405	F-7	C7586	B-4	R3055	F-3	R7421	C-7	R7573	C-3	K7511	A-4
Q4008	D-3	PP7501	D-7	C1513	C-2	C3056	E-6	C7406	F-7	C7587	B-4	R3056	F-3	R7422	C-7	R7574	C-3	K7514	C-4
Q4009	D-4	PP7502	E-7	C1514	C-2	C3057	F-2	C7407	E-7	C7588	B-4	R3057	F-3	R7427	B-7	R7575	B-3	K7515	C-4
Q7401	E-5	Diode		C1515	C-2	C3058	F-2	C7408	D-7	C7589	B-4	R3058	F-3	R7428	C-7	R7576	C-3	Transformer	
Q7402	E-8	D1501	B-2	C1516	B-6	C3059	F-2	C7409	F-7	C7590	B-4	R3059	F-3	R7429	C-7	R7577	B-3	T7501	B-2
Q7404	C-7	D4001	D-3	C1518	B-6	C3060	F-3	C7411	E-8	C7592	B-4	R3060	E-7	R7430	B-7	R7578	B-3		
Q7405	B-7	D4005	E-2	C1519	B-6	C3061	F-2	C7412	D-8	C7593	B-4	R4001	E-3	R7431	C-7	R7579	B-3		
Q7406	B-7	D4006	D-4	C1520	C-2	C3062	F-2	C7414	E-8	C7594	C-4	R4002	D-3	R7432	C-7	R7580	B-3		
Q7503	A-2	D7401	F-5	C1521	C-2	C3064	F-3	C7415	D-8	C7595	C-4	R4004	D-3	R7433	B-7	R7581	B-3		
Q7505	A-4	D7402	E-8	C1522	C-2	C3065	D-5	C7416	D-7	C7596	C-4	R4005	D-4	R7434	C-7	R7582	B-3		
Q7506	A-4	D7403	F-5	C1523	C-5	C3066	D-5	C7417	E-8	C7597	C-4	R4006	E-4	R7435	C-7	R7583	B-3		
Q7507	A-4	D7501	B-2	C1524	B-2	C3067	D-5	C7418	E-8	C7598	C-4	R4007	D-4	R7438	C-6	R7584	B-3		
Q7508	A-4	D7502	B-2	C1527	C-5	C3069	E-7	C7419	E-8	C7599	C-4	R4008	E-3	R7439	C-6	R7585	C-2		
Q7511	A-4	D7504	B-2	C1528	C-5	C3070	E-6	C7420	E-8	C7600	C-4	R4009	E-3	R7440	C-6	R7586	C-4		
Q7512	E-1	D7505	B-2	C1531	C-5	C3071	E-7	C7421	E-8	C7601	C-4	R4010	D-4	R7441	C-6	R7588	C-4		
Q7517	A-4	D7506	B-2	C1533	C-5	C4003	E-4	C7422	F-8	C7602	C-4	R4011	D-4	R7442	C-6	R7589	B-3		
Q7518	A-4	D7507	A-4	C1534	C-5	C4004	E-4	C7423	F-8	C7603	C-3	R4012	E-4	R7444	E-8	R7590	B-3		
Q7519	A-5	D7508	C-2	C1537	C-5	C4005	E-4	C7424	E-8	C7604	C-3	R4013	E-3	R7505	B-3	R7591	B-2		
Transistor-resistor		D7512	A-5	C1539	B-1	C4006	E-3	C7425	D-8	C7605	B-3	R4014	D-3	R7506	B-2	R7594	B-4		
QR3002	D-5	Crystal Osillator		C1540	B-1	C4007	E-4	C7426	D-8	C7606	B-2	R4015	E-5	R7507	B-2	R7595	C-3		
QR3003	D-5	X7501	B-4	C1541	D-1	C4008	E-4	C7427	D-7	C7607	B-3	R4017	D-2	R7508	B-2	R7596	C-3		
QR4002	D-3	X7502	B-4	C1543	D-1	C4010	E-4	C7428	F-8	C7608	B-3	R4018	E-4	R7510	B-2	R7597	C-2		
QR4003	D-3	IC Protector		C3003	E-7	C4012	E-4	C7429	F-8	C7609	C-4	R4019	C-7	R7513	B-2	R7598	C-2		
QR4004	D-3	IP7501	B-2	C3004	D-7	C4014	E-4	C7431	C-7	C7610	C-4	R4020	C-7	R7514	B-2	R7599	C-4		
QR4005	D-3	Coil		C3005	D-7	C4017	E-4	C7432	C-7	C7611	B-3	R4021	E-5	R7516	A-4	R7600	E-2		
QR4012	D-3	L1501	C-1	C3006	D-7	C4019	D-4	C7433	C-7	C7612	B-3	R4022	E-5	R7517	A-4	R7601	E-2		
QR7401	F-5	L4002	E-2	C3007	D-7	C4021	D-4	C7439	F-5	C7613	B-3	R4023	E-5	R7518	A-4	R7602	E-1		
QR7402	F-5	L7401	C-5	C3009	E-7	C4022	E-4	C7440	B-7	C7618	C-2	R4046	E-3	R7519	A-4	R7603	E-1		
QR7403	F-5	L7403	D-8	C3010	E-7	C4023	C-7	C7441	B-7	C7620	C-3	R4047	E-3	R7520	B-3	R7604	A-7		
QR7404	F-5	L7502	B-2	C3012	E-7	C4024	E-4	C7502	C-4	C7626	C-2	R4053	E-4	R7521	A-4	R7605	A-7		
QR7405	E-5	LB1501	C-1	C3013	E-7	C4025	C-7	C7503	C-2	C7633	C-2	R4055	E-3	R7522	A-3	R7606	A-7		
QR7501	C-4	LB1503	C-1	C3014	E-7	C4026	E-2	C7504	B-2	C7636	E-1	R4056	E-4	R7523	A-4	R7607	C-4		



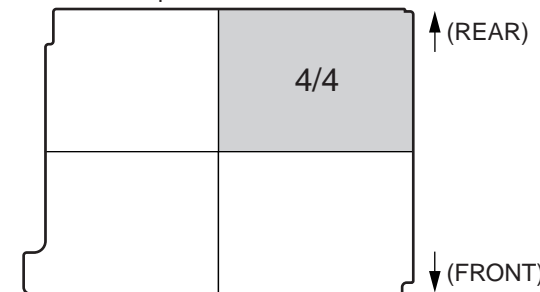
DMR-E85HEE/GCS/GN
Main P.C.B. (REP3766C)
(2/4 Section)

D

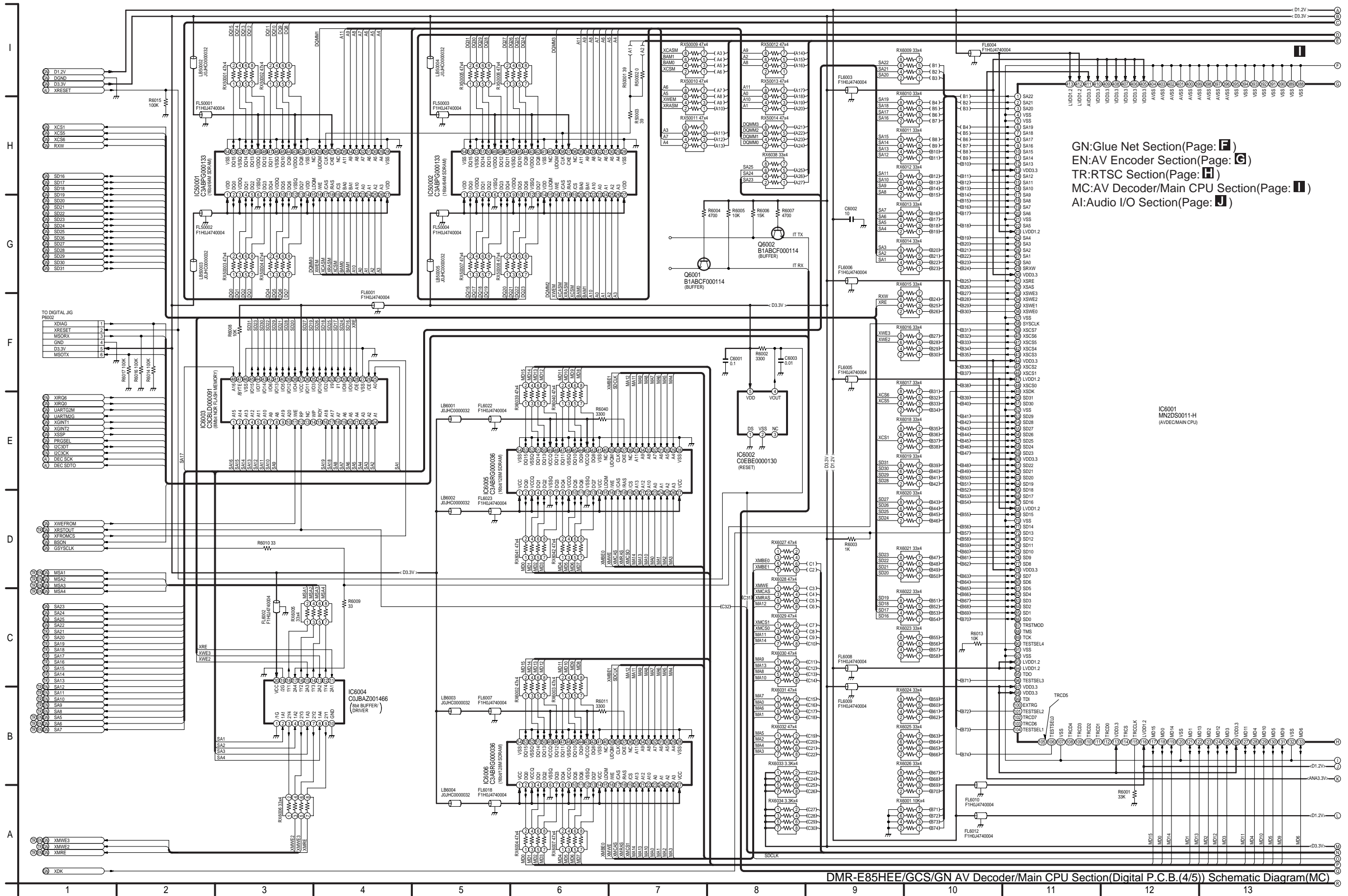


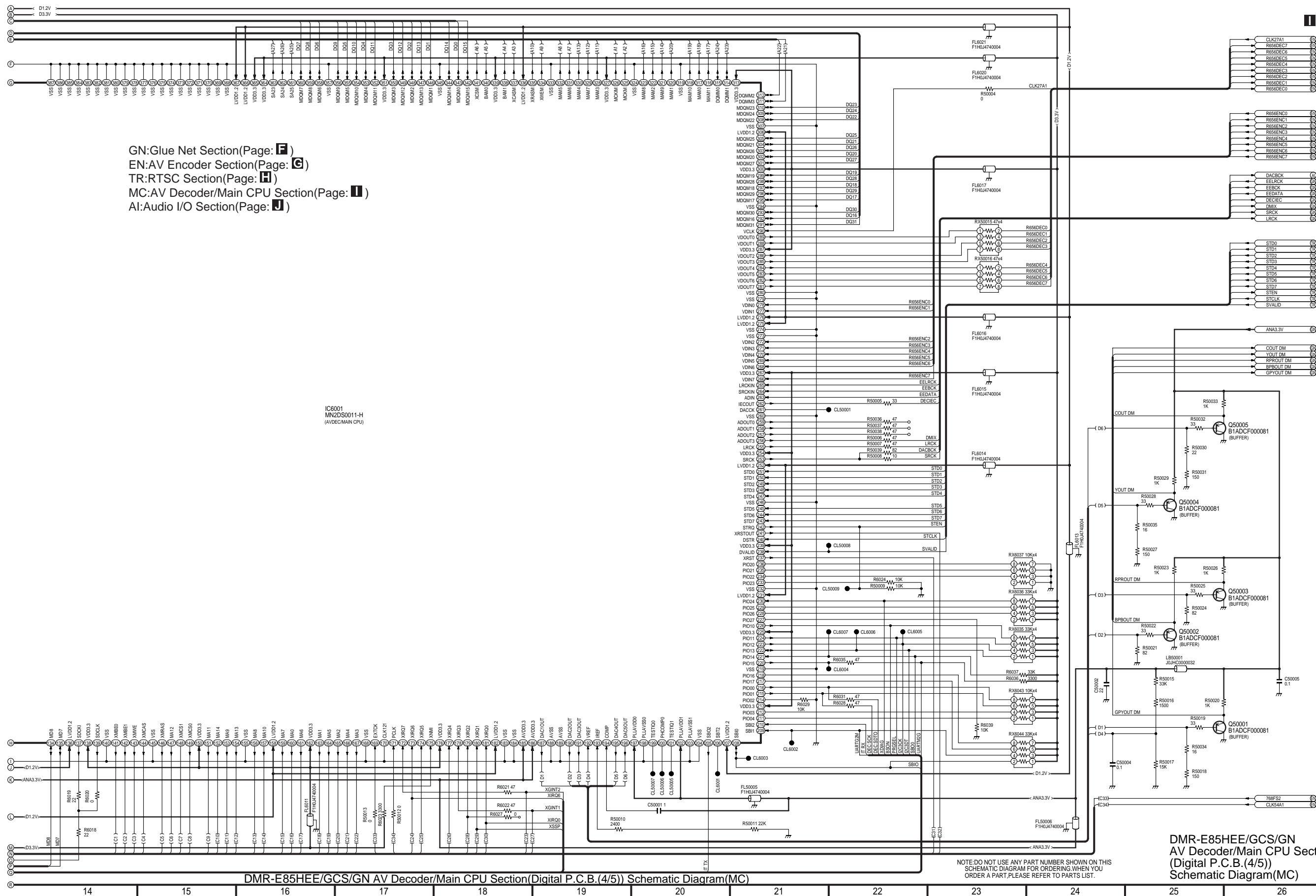


Location Map



DMR-E85HEE/GCS/GN
Main P.C.B. (REP3766C)
(4/4 Section)



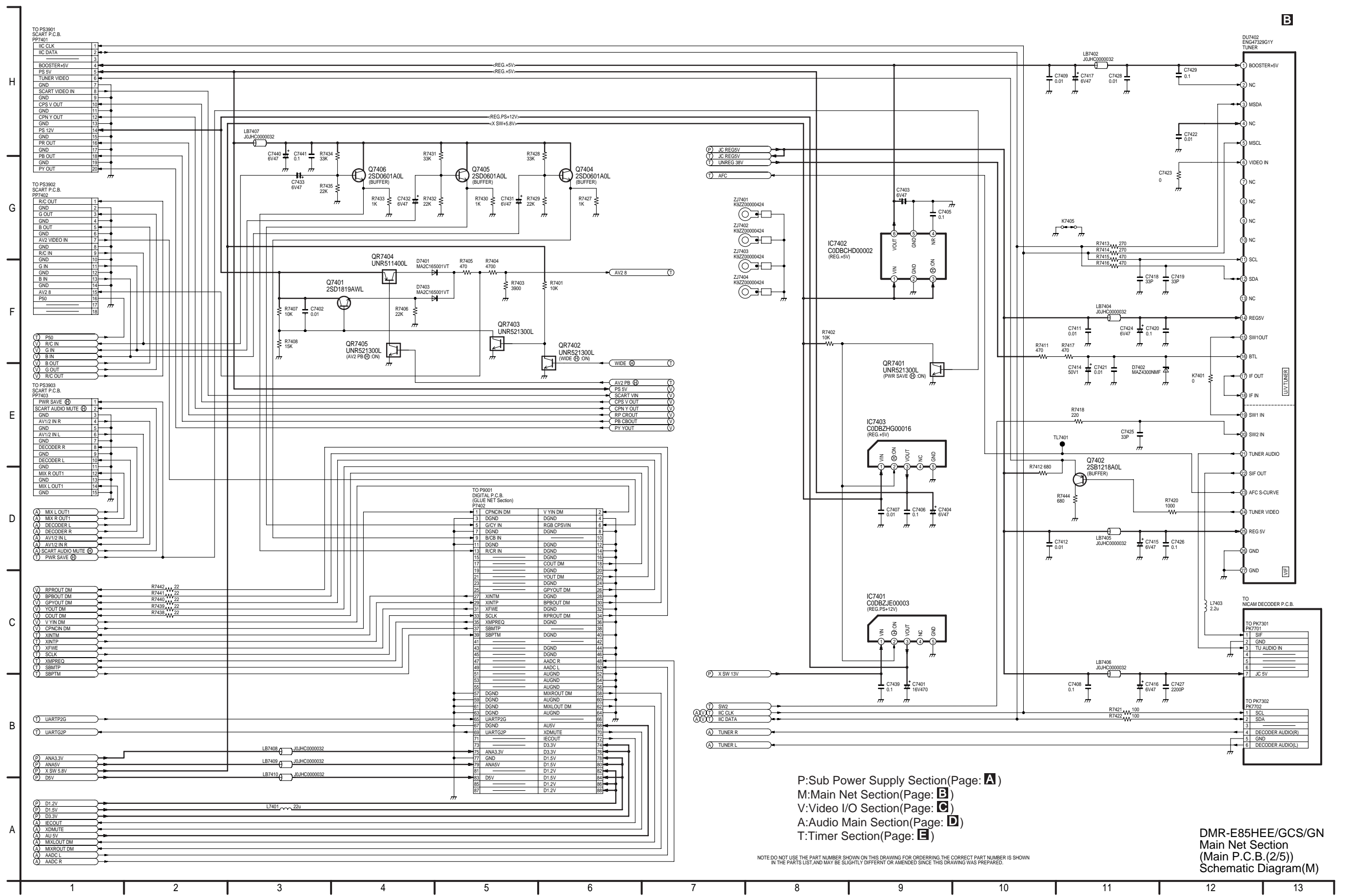


GN:Glue Net Section(Page: **F**)
EN:AV Encoder Section(Page: **C**)
TR:RTSC Section(Page: **H**)
MC:AV Decoder/Main CPU Section(Page: **I**)
AI:Audio I/O Section(Page: **J**)

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

DMR-E85HEE/GCS/GN
AV Decoder/Main CPU Section
(Digital P.C.B.(4/5))
Schematic Diagram(MC)

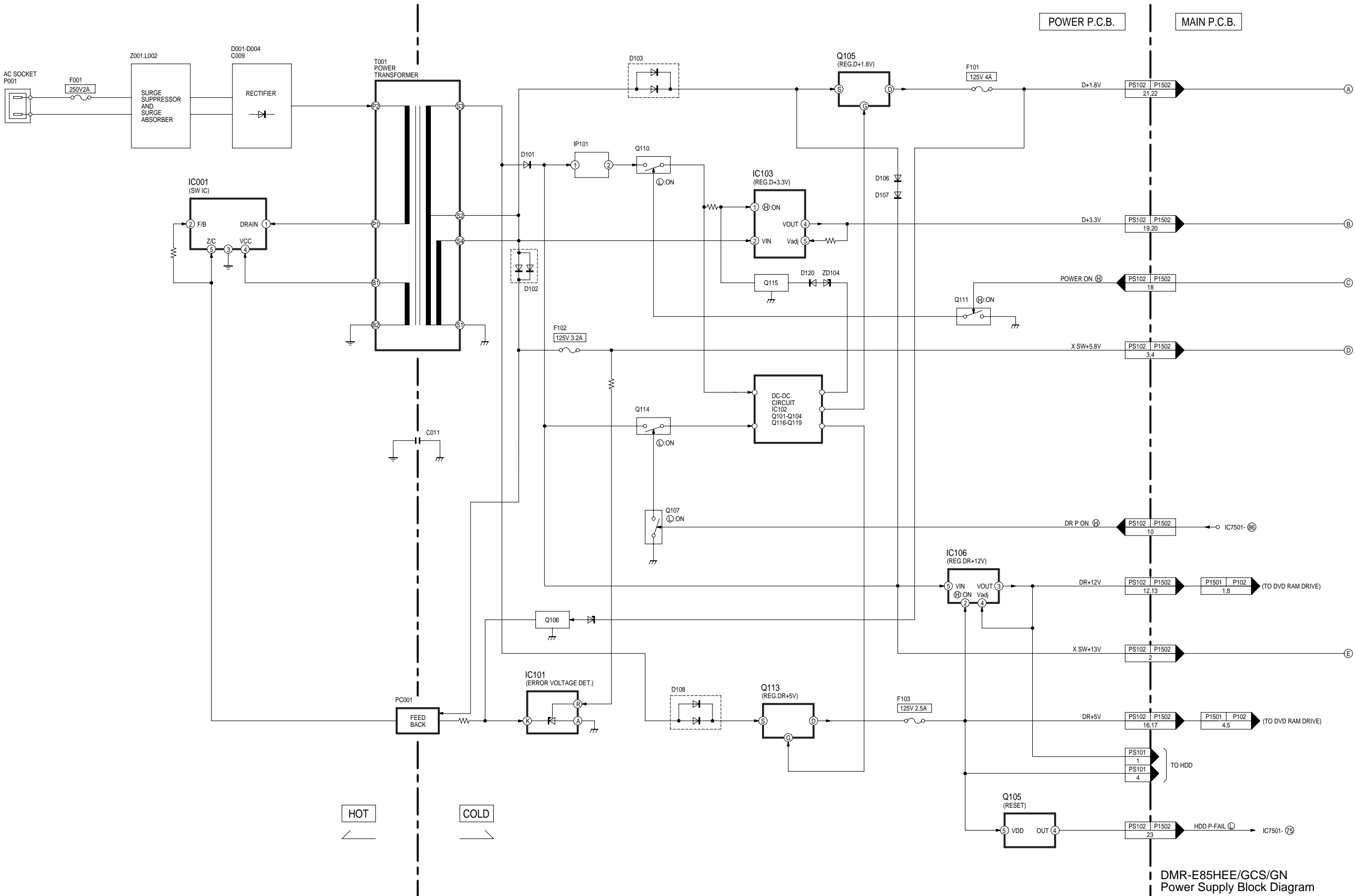


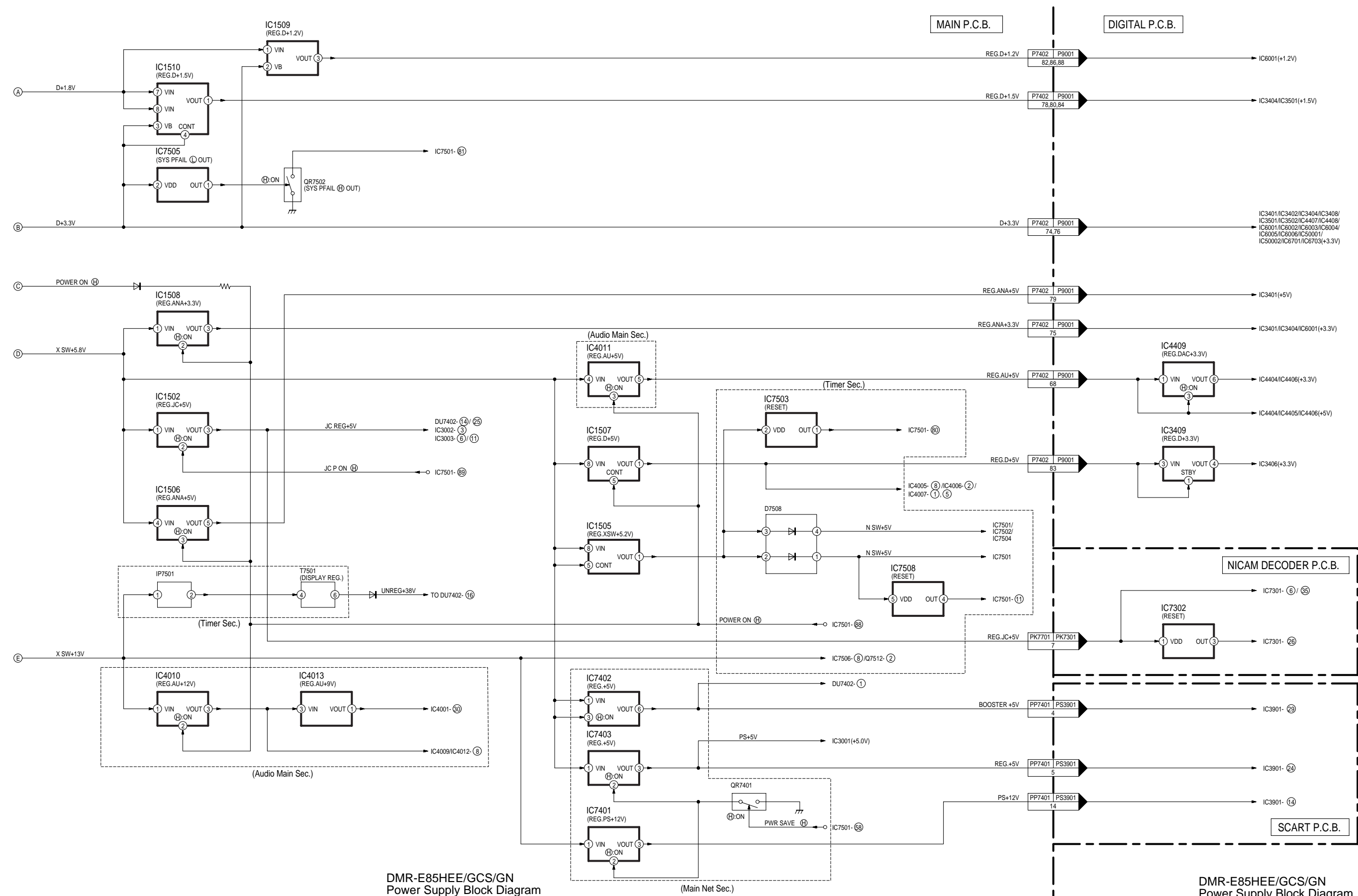


P:Sub Power Supply Section(Page: A)
M:Main Net Section(Page: B)
V:Video I/O Section(Page: C)
A:Audio Main Section(Page: D)
T:Timer Section(Page: E)

DMR-E85HEE/GCS/GN
Main Net Section
(Main P.C.B.(2/5))
Schematic Diagram(M)

NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST,AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.



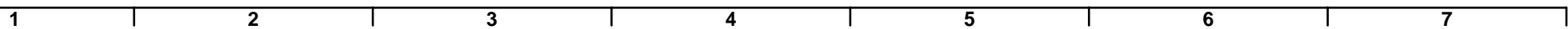


DMR-E85HEE/GCS/GN
Power Supply Block Diagram

DMR-E85HEE/GCS/GN
Power Supply Block Diagram

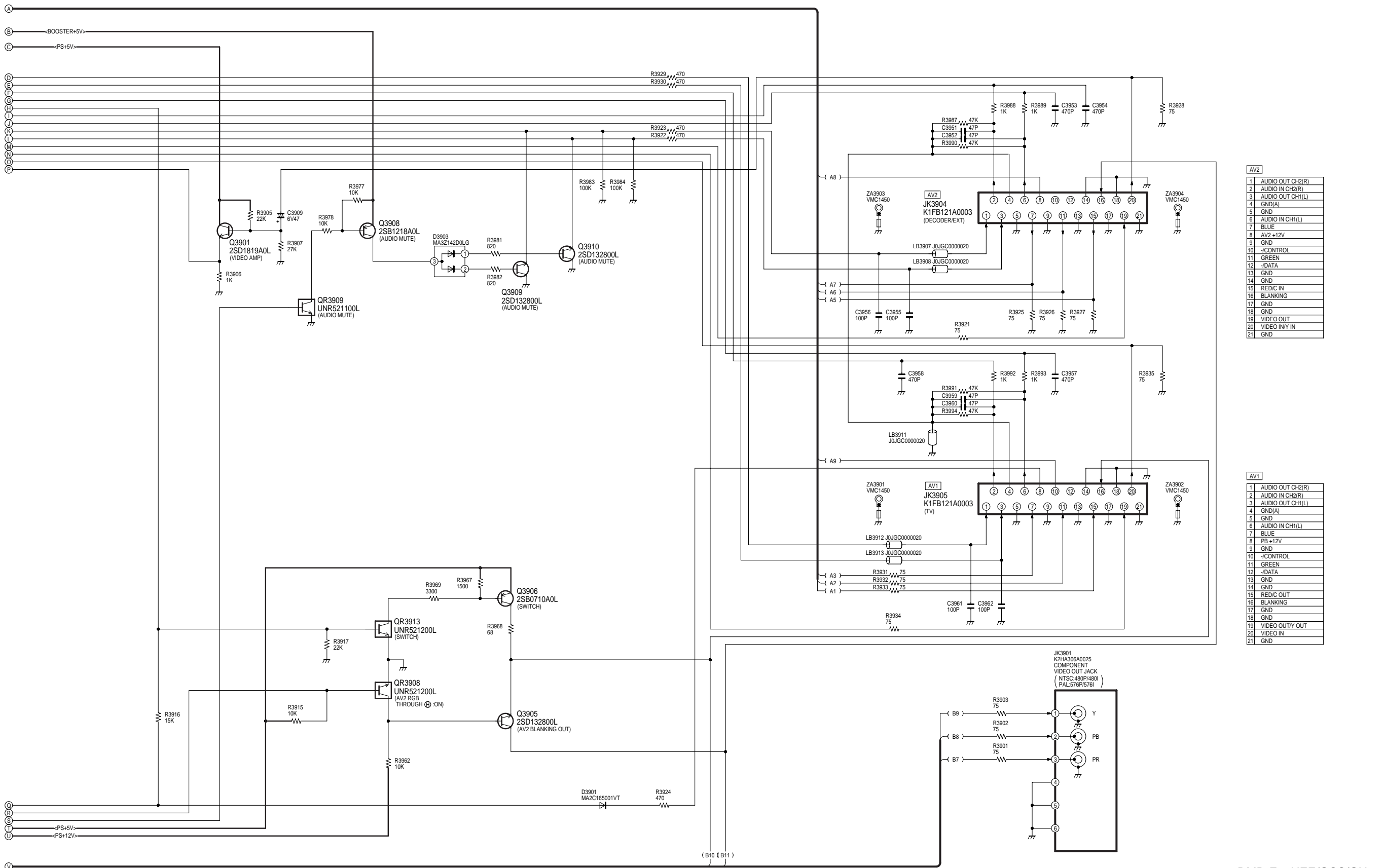
[illegible]

A vertical bar with four segments labeled A, B, C, and D from bottom to top. The segments are separated by horizontal lines.



DMR-E85HEE/GCS/GN
Power P.C.B.
(ETXMM507E4F)





AV2	
1	AUDIO OUT CH2(R)
2	AUDIO IN CH2(R)
3	AUDIO OUT CH1(L)
4	GND(A)
5	GND
6	AUDIO IN CH1(L)
7	BLUE
8	AV2 +12V
9	GND
10	-CONTROL
11	GREEN
12	-DATA
13	GND
14	GND
15	RED/C IN
16	BLANKING
17	GND
18	GND
19	VIDEO OUT
20	VIDEO IN/Y IN
21	GND

AV1	
1	AUDIO OUT CH2(R)
2	AUDIO IN CH2(R)
3	AUDIO OUT CH1(L)
4	GND(A)
5	GND
6	AUDIO IN CH1(L)
7	BLUE
8	PB +12V
9	GND
10	-CONTROL
11	GREEN
12	-DATA
13	GND
14	GND
15	RED/C OUT
16	BLANKING
17	GND
18	GND
19	VIDEO OUT/Y OUT
20	VIDEO IN
21	GND

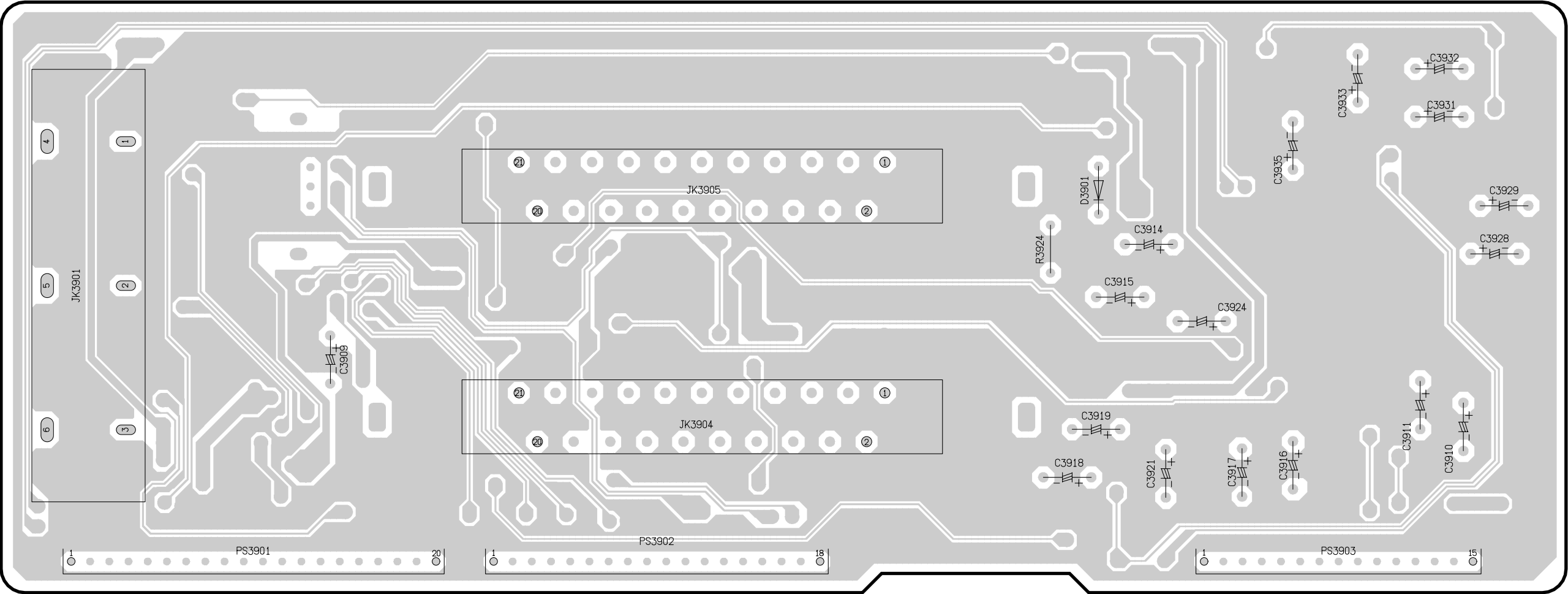
DMR-E85HEE/GCS/GN
Scart Schematic Diagram

NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST,AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DMR-E85HEE/GCS/GN
Scart Schematic Diagram

Scart P.C.B.(Component Side)			
Diode		Capacitor	
D3901	C-7	C3916	A-8
Connector		C3917	A-8
JK3901	B-1	C3918	A-7
JK3904	B-5	C3919	B-7
JK3905	C-5	C3921	A-7
PS3901	A-2	C3924	B-7
PS3902	A-4	C3928	C-9
PS3903	A-8	C3929	C-9
Capacitor		C3931	C-9
C3909	B-3	C3932	D-9
C3910	B-9	C3933	D-8
C3911	B-9	C3935	C-8
C3914	C-7	Resistor	
C3915	B-7	R3924	C-7

Scart P.C.B.

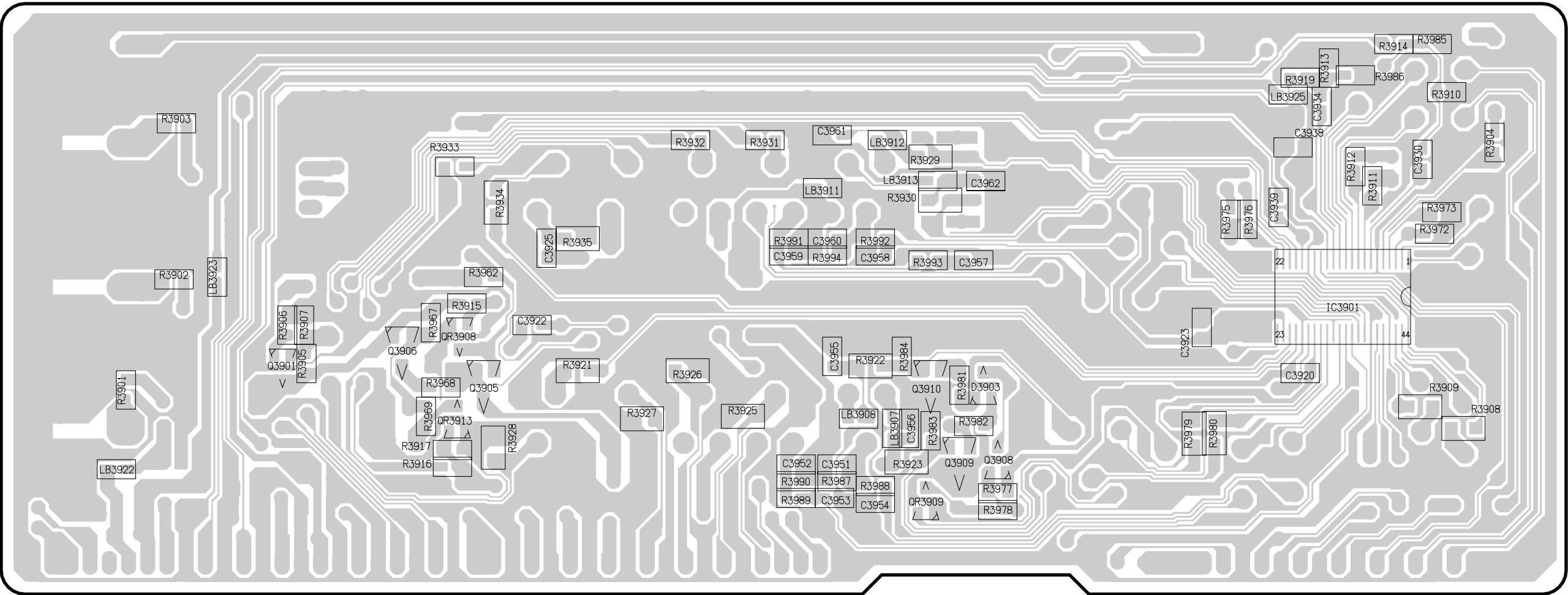


(Component Side)

DMR-E85HEE/GCS/GN
Scart P.C.B. (Component Side)
(REP3682A)

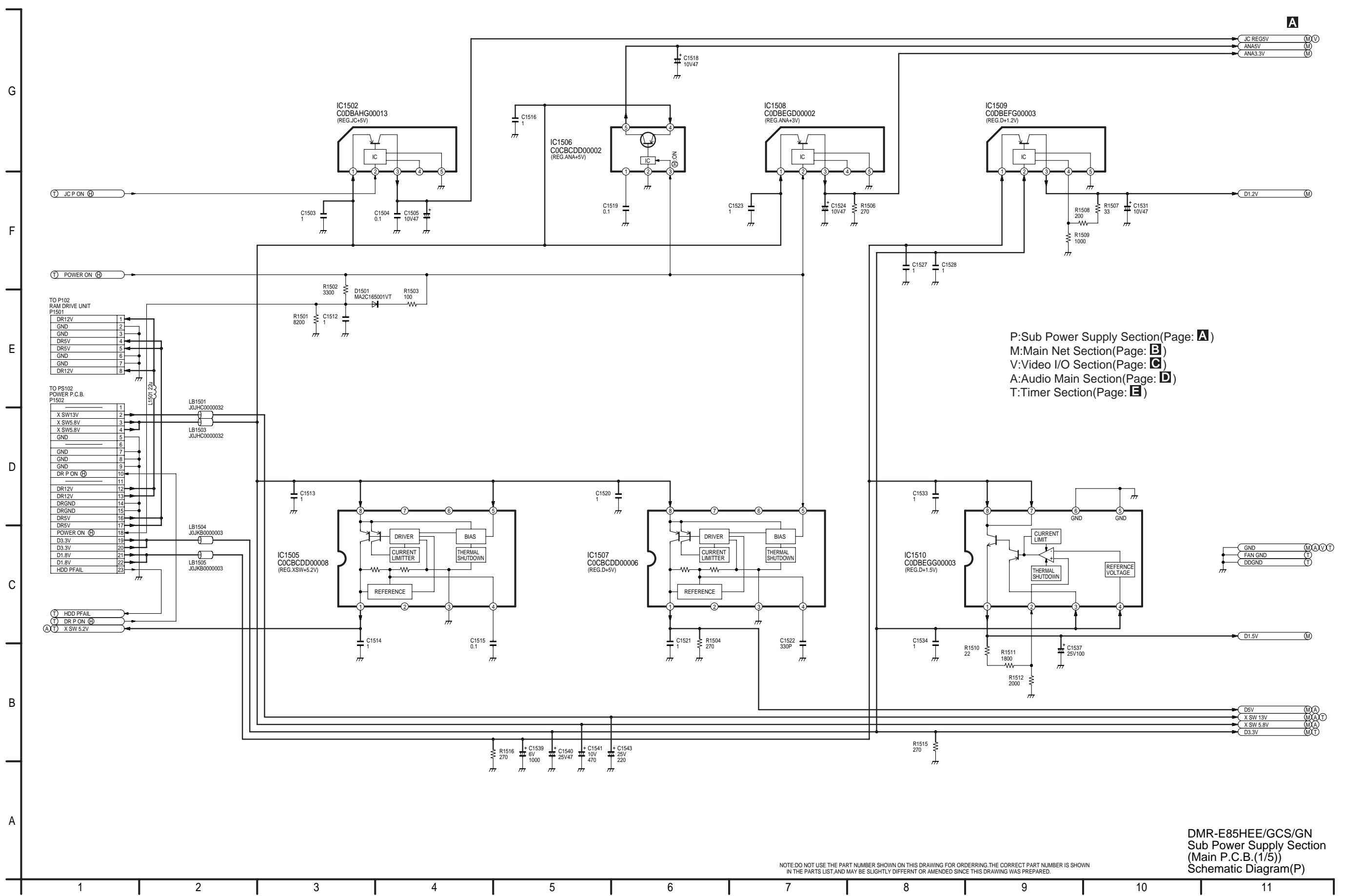
Scart P.C.B.(Foil Side)															
Integrated Circuit		Coil		C3934	C-8	Resistor		R3916	B-3	R3935	C-4	R3983	B-6		
IC3901	B-8	LB3907	B-6	C3938	C-8	R3901	B-1	R3917	B-3	R3962	C-3	R3984	B-6		
Transistor		LB3908	B-5	C3939	C-8	R3902	C-2	R3919	D-8	R3967	B-3	R3985	D-9		
Q3901	B-2	LB3911	C-5	C3951	B-5	R3903	C-2	R3921	B-4	R3968	B-3	R3986	D-8		
Q3905	B-3	LB3912	C-6	C3952	B-5	R3904	C-9	R3922	B-6	R3969	B-3	R3987	A-5		
Q3906	B-3	LB3913	C-6	C3953	A-5	R3905	B-2	R3923	B-6	R3972	C-9	R3988	A-6		
Q3908	B-6	LB3922	B-1	C3954	A-6	R3906	B-2	R3925	B-5	R3973	C-9	R3989	A-5		
Q3909	B-6	LB3923	C-2	C3955	B-5	R3907	B-2	R3926	B-5	R3975	C-7	R3990	A-5		
Q3910	B-6	LB3925	D-8	C3956	B-6	R3908	B-9	R3927	B-4	R3976	C-8	R3991	C-5		
Transistor-resistor		Capacitor		C3957	C-6	R3909	B-9	R3928	B-3	R3977	A-6	R3992	C-6		
QR3908	B-3	C3920	B-8	C3958	C-6	R3910	D-9	R3929	C-6	R3978	A-6	R3993	C-6		
QR3909	A-6	C3922	B-4	C3959	C-5	R3911	C-8	R3930	C-6	R3979	B-7	R3994	C-5		
QR3913	B-3	C3923	B-7	C3960	C-5	R3912	C-8	R3932	C-5	R3980	B-7				
Diode		C3925	C-4	C3961	C-5	R3914	D-8	R3933	C-3	R3981	B-6				
D3903	B-6	C3930	C-8	C3962	C-6	R3915	B-3	R3934	C-4	R3982	B-6				

Scart P.C.B.

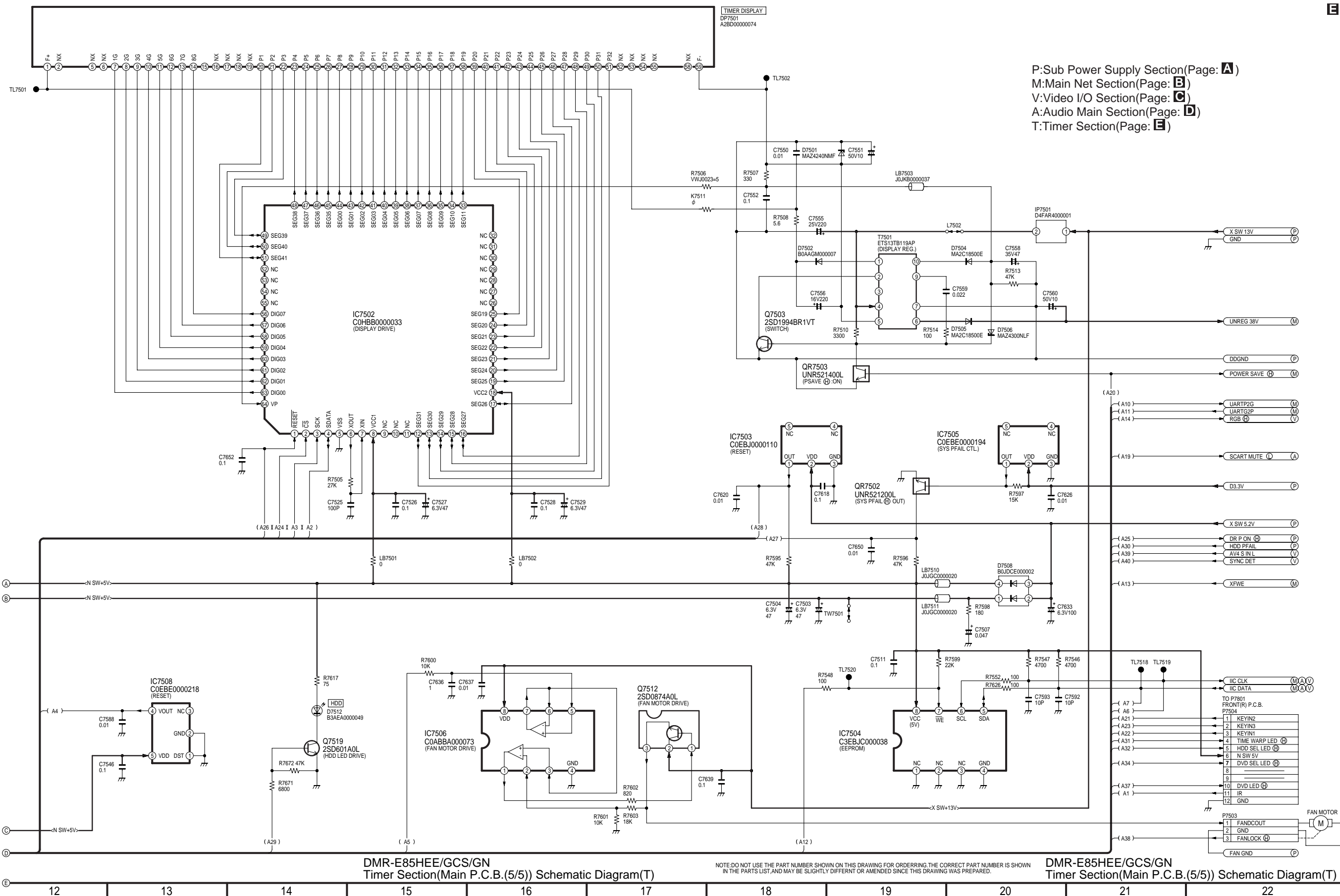


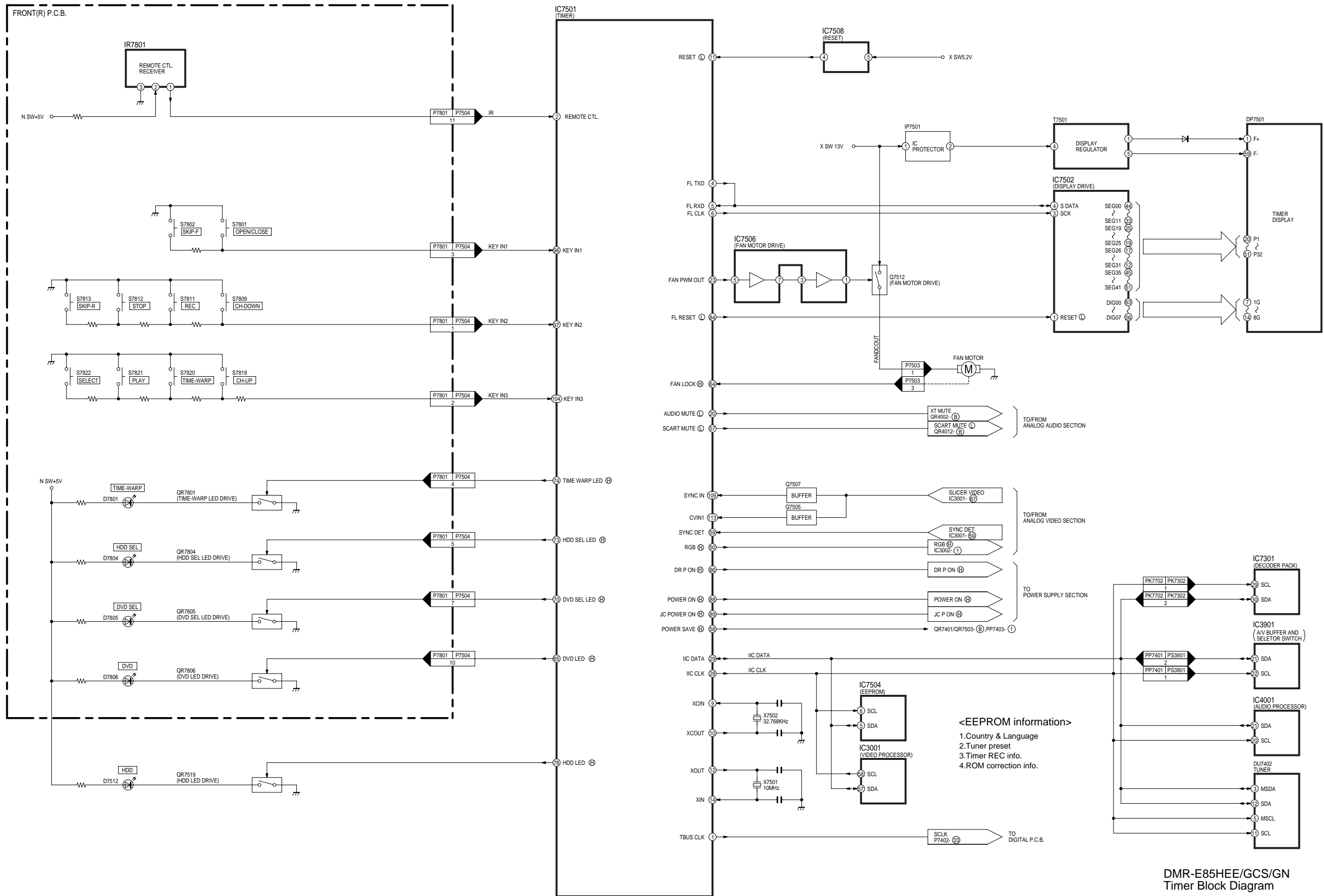
(Foil Side)

Ref No. MODE	IC3901																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
REC	5.6	5.6	0	0	1.2	0	2.2	0	0	5.6	5.6	5.0	1.8	12.1	5.6	5.6	0	1.8	3.6	0
PLAY	5.6	5.6	0	0	1.2	0	2.2	0	0	5.6	5.6	5.0	1.8	12.1	5.6	5.6	0	1.8	3.6	11.6
STOP	5.6	5.6	0	0	1.2	0	2.2	0	0	5.6	5.6	5.0	1.8	12.1	5.6	5.6	0	1.8	3.6	0
Ref No. MODE	IC3901																			
	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
REC	4.2	4.5	1.8	5.0	2.0	2.0	0	1.8	5.0	4.9	4.9	0	5.6	5.6	0	5.6	5.6	0	4.9	4.9
PLAY	4.2	4.5	1.8	5.0	2.0	2.0	0	1.8	5.0	4.9	4.9	0	5.6	5.6	0.2	5.6	5.6	0	4.9	4.9
STOP	4.2	4.5	1.8	5.0	2.0	2.0	0	1.8	5.0	4.9	4.9	0	5.6	5.6	0	5.6	5.6	0	4.9	4.9
Ref No. MODE	IC3901																			
	41	42	43	44																
REC	0	4.9	4.9	0																
PLAY	0	4.9	4.9	0																
STOP	0	4.9	4.9	0																
Ref No. MODE	Q3901				Q3905				Q3906				Q3908				Q3909			
	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
REC	2.1	5.0	2.7		0	0	0		5.0	0	5.0		5.0	-0.6	5.0		0	0	-0.2	
PLAY	2.1	5.0	2.7		0	0	0		5.0	0	5.0		5.0	-0.6	5.0		0	0	-0.2	
STOP	2.1	5.0	2.7		0	0	0		5.0	0	5.0		5.0	-0.6	5.0		0	0	-0.3	
Ref No. MODE	Q3910				QR3908				QR3909				QR3913							
	E	C	B		E	C	B		E	C	B		E	C	B					
REC	0	0	0		0	3.6	0		0	5.0	0		0	5.0	0					
PLAY	0	0	0		0	0	3.6		0	5.0	0		0	5.0	0.2					
STOP	0	0	-0.1		0	0	3.6		0	5.0	0		0	5.0	0					

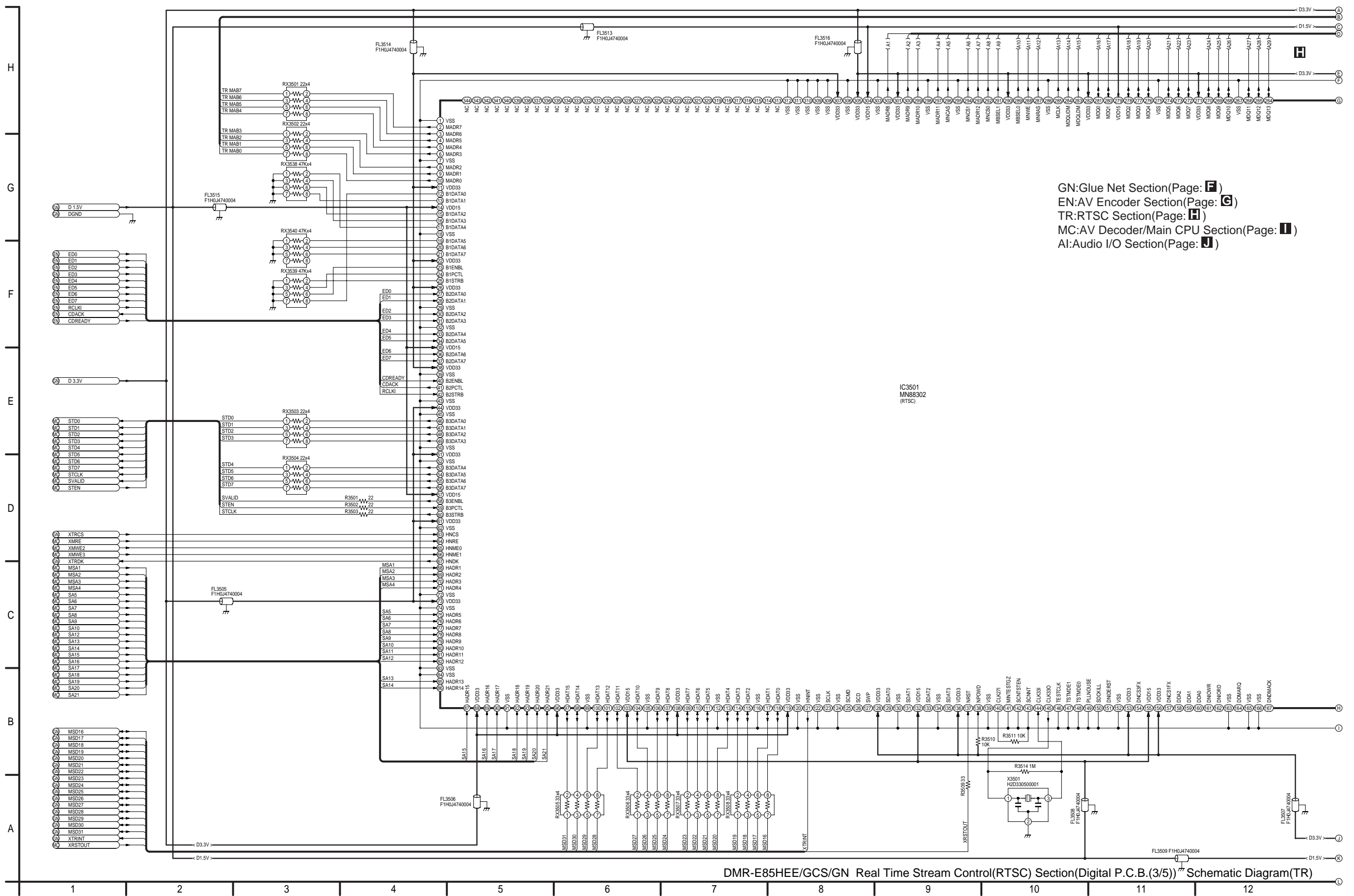


NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST,AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.



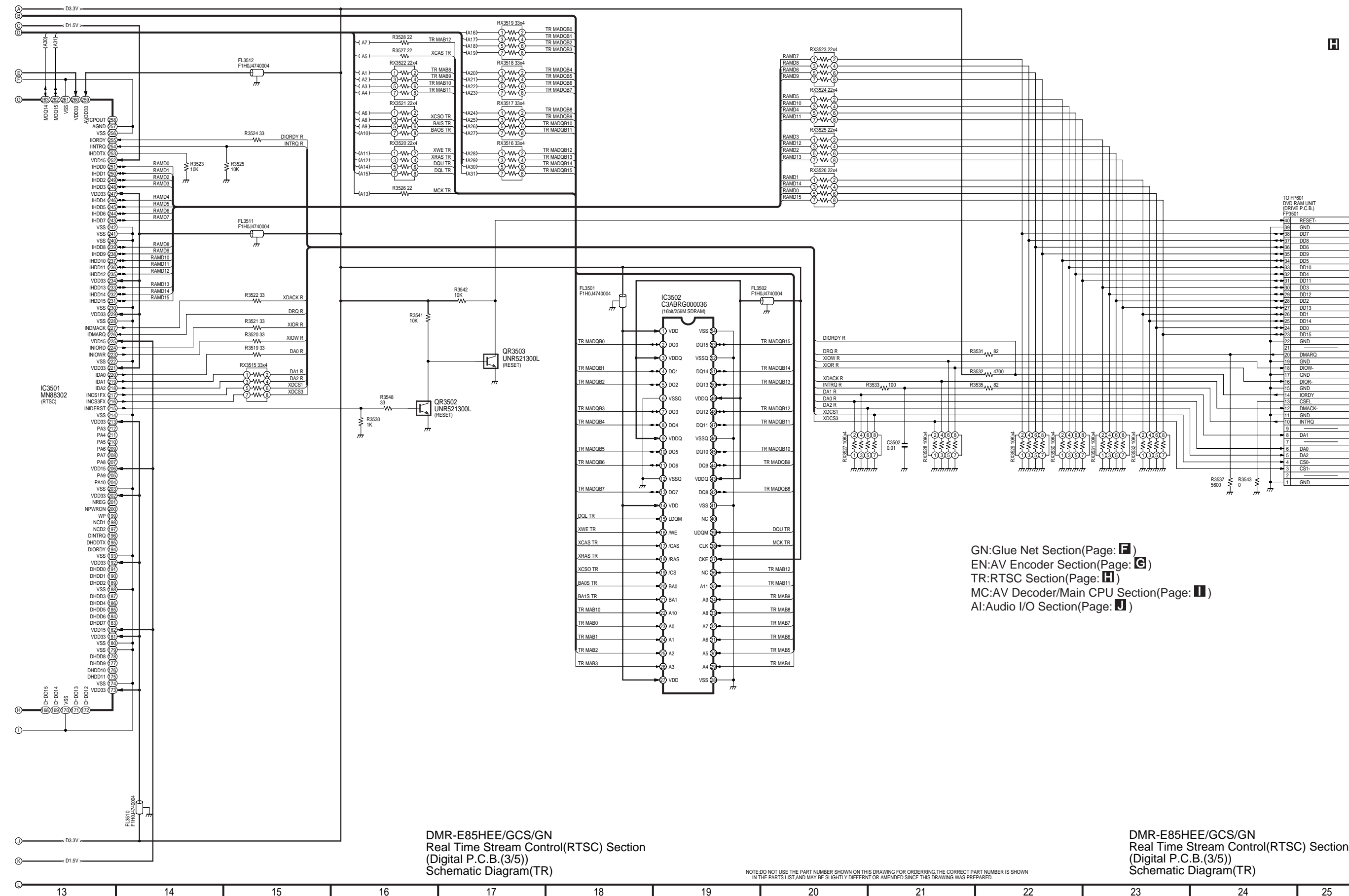


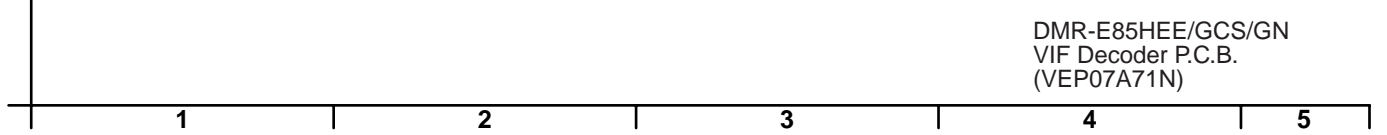
DMR-E85HEE/GCS/GN
Timer Block Diagram



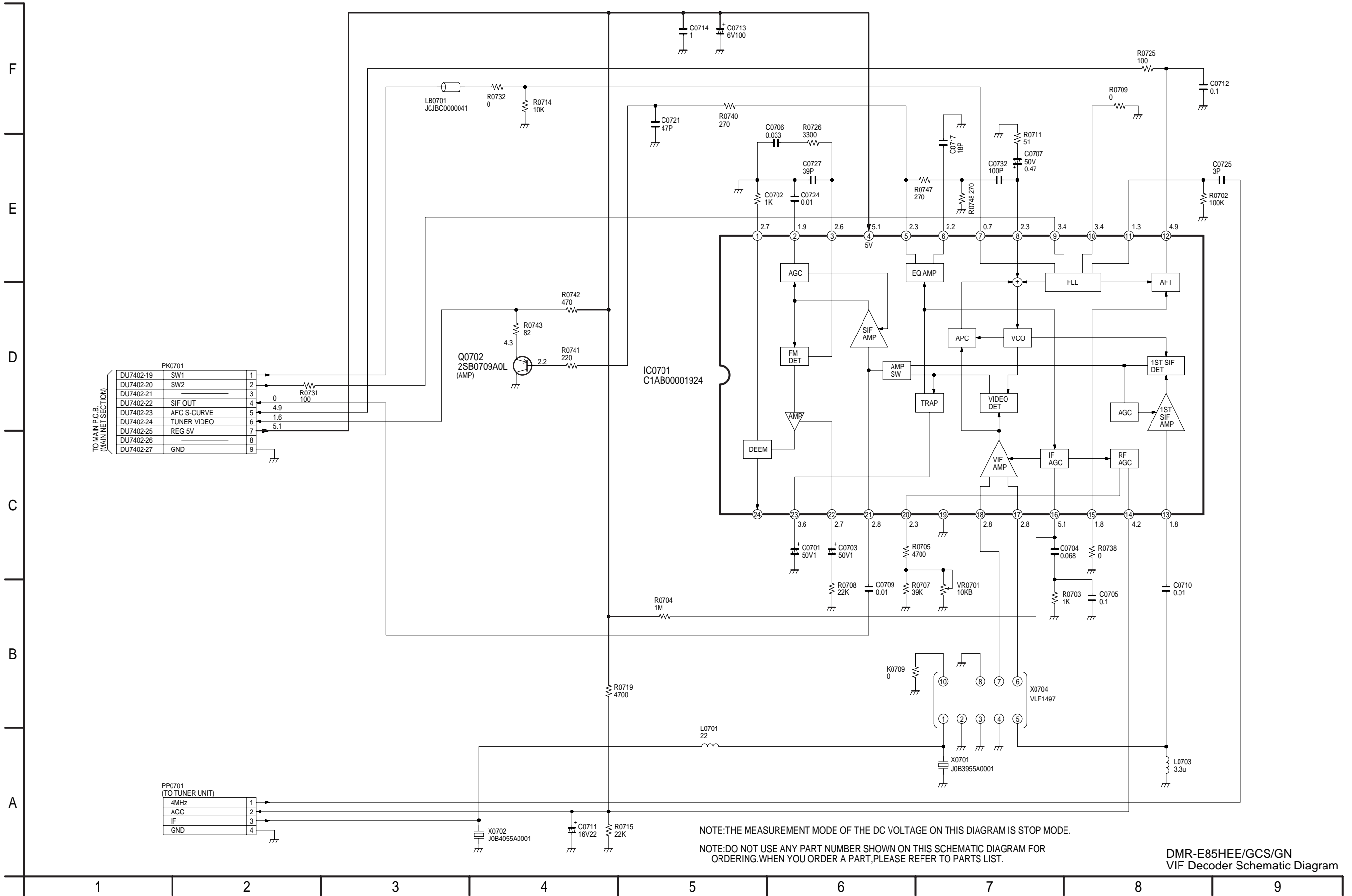
GN:Glue Net Section(Page: **F**)
EN:AV Encoder Section(Page: **G**)
TR:RTSC Section(Page: **H**)
MC:AV Decoder/Main CPU Section(Page: **I**)
AI:Audio I/O Section(Page: **J**)

DMR-E85HEE/GCS/GN Real Time Stream Control(RTSC) Section(Digital P.C.B.(3/5)) Schematic Diagram(TR)

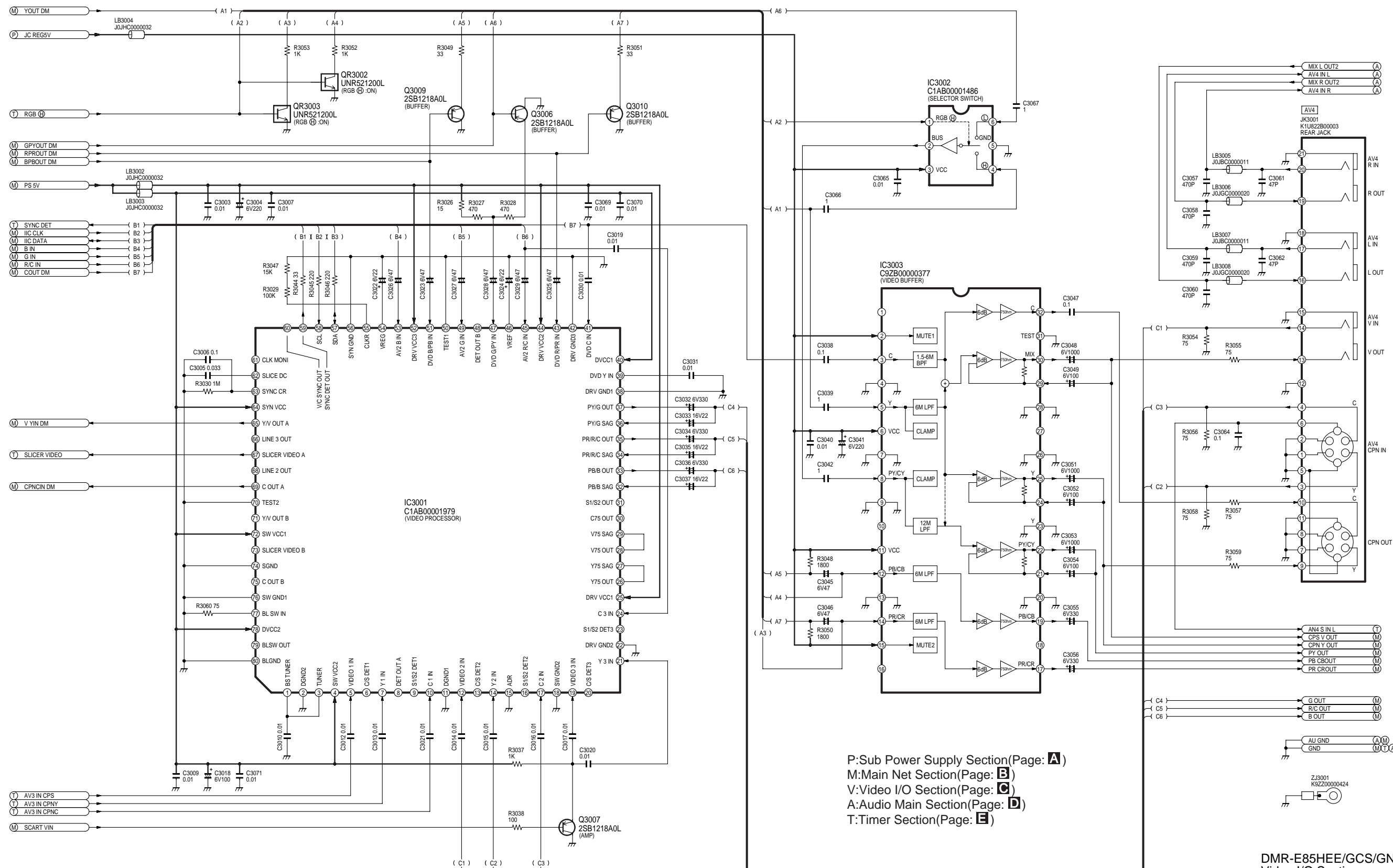




DMR-E85HEE/GCS/GN
VIF Decoder P.C.B.
(VEP07A71N)



DMR-E85HEE/GCS/GN
VIF Decoder Schematic Diagram



NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DMR-E85HEE/GCS/GN
Video I/O Section
(Main P.C.B. (3/5))
Schematic Diagram (V)

Ref No.	IC1502						IC1505									IC1506				
MODE	1	2	3	4	5		1	2	3	4	5	6	7	8		1	2	3	4	5
REC	5.6	4.9	5.0	0	0		5.2	0	0	3.6	5.7	0	0	5.7		1.3	0	4.8	5.6	5.0
PLAY	5.6	4.9	5.0	0	0		5.2	0	0	3.6	5.7	0	0	5.7		1.3	0	4.8	5.6	5.0
STOP	5.6	4.9	5.0	0	0		5.2	0	0	3.6	5.7	0	0	5.7		1.3	0	4.8	5.6	5.0
Ref No.	IC1507									IC1508						IC1509				
MODE	1	2	3	4	5	6	7	8		1	2	3	4	5		1	2	3	4	5
REC	5.0	0	0	3.4	4.8	0	0	5.7		5.7	4.8	3.3	0	0		2.0	3.5	1.2	1.0	0
PLAY	5.0	0	0	3.4	4.8	0	0	5.7		5.7	4.8	3.3	0	0		2.0	3.5	1.2	1.0	0
STOP	5.0	0	0	3.4	4.8	0	0	5.7		5.7	4.8	3.3	0	0		2.0	3.5	1.2	1.0	0
Ref No.	IC1510																			
MODE	1	2	3	4	5	6	7	8												
REC	1.5	0.8	3.5	3.5	0	0	2.0	2.0												
PLAY	1.5	0.8	3.5	3.5	0	0	2.0	2.0												
STOP	1.5	0.8	3.5	3.5	0	0	2.0	2.0												
Ref No.	IC3001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
REC	1.4	0	1.4	5.0	1.4	4.9	1.4	4.7	0.1	2.7	0	1.9	4.9	1.4	0	0.1	2.7	0	1.4	4.9
PLAY	1.4	0	1.4	5.0	1.4	4.9	1.4	4.7	0.1	2.7	0	1.9	4.9	1.4	0	0	2.7	0	1.4	4.9
STOP	1.4	0	1.4	5.0	1.4	4.9	1.4	4.7	0.1	2.7	0	1.9	4.9	1.4	0	0.1	2.7	0	1.4	4.9
Ref No.	IC3001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
REC	1.4	0	0.1	2.7	5.0	0.7	0.7	0.7	0.7	2.2	0	2.2	2.2	2.2	2.2	2.2	2.2	0	1.4	5.0
PLAY	1.4	0	0.1	2.7	5.0	0.7	0.7	0.7	0.7	2.2	0	2.2	2.2	2.2	2.2	2.2	2.2	0	1.4	5.0
STOP	1.4	0	0.1	2.7	5.0	0.7	0.7	0.7	0.7	2.2	0	2.2	2.2	2.2	2.2	2.2	2.2	0	1.4	5.0
Ref No.	IC3001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
REC	2.8	0	2.8	5.0	2.8	2.8	2.8	4.7	2.8	0	2.8	5.0	2.8	2.9	1.0	0	4.1	4.5	0	0.4
PLAY	2.8	0	2.8	5.0	2.8	2.8	2.8	4.7	2.8	0	2.8	5.0	2.8	2.9	1.0	0	4.1	4.5	0	0.4
STOP	2.8	0	2.8	5.0	2.8	2.8	2.8	4.7	2.8	0	2.8	5.0	2.8	2.9	1.0	0	4.2	4.5	0	0
Ref No.	IC3001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
REC	0	0.8	0.8	5.0	1.3	0	1.8	0	2.0	0	0.8	5.0	0.8	0	2.0	0	0	5.0	0	0
PLAY	0	0.8	0.8	5.0	1.3	0	1.9	0	2.1	0	0.8	5.0	0.8	0	2.0	0	0	5.0	0	0
STOP	0	0.9	0	5.0	0.9	0	0.9	0	2.1	0	0.8	5.0	0.7	0	2.0	0	0	5.0	0	0
Ref No.	IC3002																			
MODE	1	2	3	4	5	6														
REC	0	1.7	5.0	2.5	0	2.4														
PLAY	0	1.7	5.0	2.5	0	2.4														
STOP	0	1.7	5.0	2.5	0	2.4														

Ref No.	IC3003																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
REC	2.1	5.0	2.7	0	2.6	5.0	0	2.6	0	2.0	5.0	2.8	0	2.8	5.0	2.2	2.3	0	2.3	0
PLAY	2.1	5.0	2.7	0	2.6	5.0	0	2.6	0	2.0	5.0	2.8	0	2.8	5.0	2.2	2.3	0	2.3	0
STOP	2.1	5.0	2.7	0	2.6	5.0	0	2.6	0	2.0	5.0	2.8	0	2.8	5.0	2.2	2.3	0	2.3	0
Ref No.	IC3003																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32								
REC	2.1	2.1	0	2.1	2.1	0	2.0	0	2.1	2.1	0	2.3								
PLAY	2.1	2.1	0	2.1	2.2	0	2.0	0	2.1	2.1	0	2.3								
STOP	2.1	2.2	0	2.2	2.2	0	2.0	0	2.1	2.1	0	2.3								
Ref No.	IC4001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
REC	0.3	4.5	4.5	0.3	0.3	4.6	4.6	3.4	4.5	4.5	4.5	4.5	4.5	4.5	0	4.5	0	4.5	0	4.5
PLAY	0.3	4.5	4.5	0.1	0.1	4.6	4.6	3.4	4.5	4.5	4.5	4.5	4.5	4.5	0	4.5	0	4.5	0	4.5
STOP	0.3	4.5	4.5	0.1	0.1	4.6	4.6	3.4	4.5	4.5	4.5	4.5	4.5	4.5	0	4.5	0	4.5	0	4.5
Ref No.	IC4001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32								
REC	4.1	0	4.6	4.5	4.5	4.5	4.5	4.6	4.6	9.2	4.5	4.5								
PLAY	4.1	0	4.6	4.5	4.5	4.5	4.5	4.6	4.6	9.2	4.5	4.5								
STOP	4.2	0	4.6	4.5	4.5	4.5	4.5	4.6	4.6	9.2	4.5	4.5								
Ref No.	IC4005										IC4006					IC4007				
MODE	1	2	3	4	5	6	7	8			1	2	3			1	2	3	4	5
REC	2.5	5.0	0	0	5.0	0	2.5	5.0			2.5	5.0	0			5.0	1.7	0	2.5	5.0
PLAY	2.5	5.0	0	0	5.0	0	2.5	5.0			2.5	5.0	0			5.0	1.7	0	2.5	5.0
STOP	2.5	5.0	0	0	5.0	0	2.5	5.0			2.5	5.0	0			5.0	1.8	0	2.5	5.0
Ref No.	IC4009								IC4010						IC4011					
MODE	1	2	3	4	5	6	7	8			1	2	3	4	5		1	2	3	4
REC	6.0	6.0	6.0	0	6.0	6.0	6.0	12.1			13.5	4.8	12.1	0	0		1.2	0	4.8	5.7
PLAY	6.0	6.0	6.0	0	6.0	6.0	6.0	12.1			13.5	4.8	12.1	0	0		1.2	0	4.8	5.7
STOP	6.0	6.1	6.1	0	6.1	6.1	6.1	12.1			13.6	4.8	12.1	0	0		1.2	0	4.8	5.7
Ref No.	IC4012								IC4013					IC7401						
MODE	1	2	3	4	5	6	7	8			1	2	3			1	2	3	4	5
REC	6.0	6.0	6.0	0	6.0	6.0	6.0	12.1			9.2	0	12.1			13.5	3.3	12.1	0	0
PLAY	6.0	6.0	6.0	0	6.0	6.0	6.0	12.1			9.2	0	12.1			13.5	3.3	12.1	0	0
STOP	6.1	6.1	6.1	0	6.0	6.1	6.1	12.1			9.2	0	12.1			13.6	3.3	12.1	0	0
Ref No.	IC7402							IC7403												
MODE	1	2	3	4	5	6		1	2	3	4	5								
REC	5.5	0	5.5	1.2	0	5.0		5.5	3.3	5.0	0	0								
PLAY	5.5	0	5.5	1.2	0	5.0		5.5	3.3	5.0	0	0								
STOP	5.6	0	5.6	1.3	0	5.0		5.6	3.3	5.0	0	0								
Ref No.	IC7501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
REC	4.9	4.9	0	4.1	4.1	4.4	0	0	-	-	4.9	-	0	-	4.9	4.9	5.0	4.9	0.3	4.9
PLAY	4.9	4.9	0	4.1	4.1	4.4	0	0	-	-	4.9	-	0	-	4.9	4.9	5.0	4.9	0.3	4.9
STOP	4.9	4.9	0	4.1	4.1	4.4	0	0	-	-	4.9	-	0	-	4.9	4.9	5.0	4.9	0	4.9
Ref No.	IC7501																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
REC	0	0	0	0	0	0	0	4.5	4.1	0	1.8	1.7	0	4.9	0	0	0.3	0	5.0	4.9
PLAY	0	0	0	0	0	0	4.9	4.5	4.1	0	1.8	1.7	1.9	4.9	2.6	0	0.3	0.1	5.0	4.9
STOP	0	0	0	0	0	0	0	4.5	4.2	0	1.8	1.7	1.9	4.9	2.6	0	0	0.1	5.0	4.9
Ref No.	IC7501																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
REC	0	0	0	0	0	4.9	0	0	0	0	0	0	4.9	0	0	4.9	4.9	0	0	0
PLAY	0	0	0	0	0	4.9	0	0	0	0	0	0	4.9	0	0	4.9	4.9	0	0	0
STOP	0	0	0	0	0	4.9	0	0	0	0	0	0	4.9	0	0	4.9	4.9	0	0	0
Ref No.	IC7501																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
REC	0	4.9	4.9	4.9	4.9	0	0	0	4.9	4.9	0	4.9	0	0	0	4.9	0	0	0	4.9
PLAY	0	4.9	4.9	4.9	4.9	0	0	0	4.9	4.9	0	4.9	0	0	0	4.9	0	0	0	4.9
STOP	0	4.9	4.9	4.9	4.9	0	0	0	4.9	4.9	0	4.9	0	0	0	4.9	0	0	0	4.9
Ref No.	IC7501																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
REC	0	4.9	0	4.9	0	4.9	3.0	0	4.9	0	0	0	0	4.9	4.9	4.9	4.9	4.9	2.3	0
PLAY	0	4.9	0	4.9	0	4.9	3.0	4.9	4.9	0	0	0	0	4.9	4.9	4.9	4.9	4.9	2.3	5.0
STOP	0	4.9	0	4.9	0	4.9	3.0	4.9	4.9	0	0	0	0	4.9	4.9	4.9	4.9	4.9	2.3	0
Ref No.	IC7501																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116				
REC	0.2	0.2	0	4.9	4.9	4.9	4.9	4.9	2.0	1.3	0	4.9	2.0	0	0	4.9				
PLAY	0.3	0.3	0	4.9	4.9	4.9	4.9	4.9	2.0	1.3	0	4.9	2.0	0	0	4.9				
STOP	0.2	0.2	0	4.9	4.9	4.9	4.9	4.9	1.1	1.3	0	4.9	1.1	0	0	4.9				
Ref No.	IC7502																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
REC	4.9	3.0	4.4	4.1	0	2.2	2.2	4.9	-28.6	-28.6	-28.6	-28.6	-28.6	-25.4	-25.4	-22.3	-28.6	4.9	-28.6	-25.4
PLAY	4.9	3.0	4.4	4.1	0	2.2	2.2	4.9	-28.6	-28.6	-28.6	-28.6	-28.6	-25.5	-25.5	-22.3	-28.6	4.9	-28.6	-28.6
STOP	4.9	3.0	4.4	4.1	0	2.2	2.2	4.9	-28.6	-28.6	-28.6	-28.6	-28.6	-28.6	-25.5	-25.5	-22.3	-28.6	4.9	-25.5
Ref No.	IC7502																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
REC	-28.6	-28.6	-28.6	-22.2	-25.4	-28.6	-28.6	-28.6	-28.6	-28.6	-28.6	-28.6	-16.0	-16.0	-19.1	-19.2	-22.3	-22.3	-19.1	-22.3
PLAY	-25.4	-28.6	-25.4	-22.3	-25.4	-28.6	-28.6	-28.6	-28.6	-28.6	-28.6	-28.6	-19.1	-16.0	-25.4	-22.3	-25.5	-22.3	-22.3	-15.9
STOP	-28.6	-28.6	-28.6	-25.5	-22.3	-28.6	-28.6	-28.6	-28.6	-28.6	-28.6	-28.6	-25.5	-19.1	-28.6	-22.3	-28.6	-22.3	-25.5	-19.1
Ref No.	IC7502																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
REC	-15.9	-15.9	-28.6	-28.6	-28.6	-28.6	-22.3	-25.4	-19.2	-16.0	-22.2	-28.6	-28.6	-28.6	-28.6	-25.5	-25.5	-25.5	-25.5	-25.5
PLAY	-19.1	-19.1	-28.6	-28.6	-28.6	-25.4	-22.3	-25.5	-19.2	-16.0	-22.3	-28.6	-28.6	-28.6	-28.6	-25.5	-25.5	-25.5	-25.5	-25.5
STOP	-25.5	-15.9	-28.6	-28.6	-28.6	-28.7	-22.3	-25.5	-22.3	-19.2	-22.3	-28.6	-28.6	-28.6	-28.7	-25.5	-25.5	-25.5	-25.6	-25.5

Ref No.	IC7502																			
MODE	61	62	63	64																
REC	-25.1	-25.5	-25.5	-28.8																
PLAY	-25.5	-25.5	-25.5	-28.8																
STOP	-25.6	-25.5	-25.6	-28.9																
Ref No.	IC7503					IC7504								IC7505						
MODE	1	2	3	4	5		1	2	3	4	5	6	7	8		1	2	3	4	5
REC	5.0	5.2	0	0	0		0	0	0	0	4.1	4.5	4.9	4.9		2.3	3.5	0	0	0
PLAY	4.9	5.2	0	0	0		0	0	0	0	4.1	4.5	4.9	4.9		2.3	3.5	0	0	0
STOP	4.9	5.2	0	0	0		0	0	0	0	4.2	4.5	4.9	4.9		2.3	3.5	0	0	0
Ref No.	IC7506								IC7508											
MODE	1	2	3	4	5	6	7	8		1	2	3	4	5						
REC	0.4	0	0	0	0	0	0	13.5		0	0	0	4.9	4.9						
PLAY	0.4	0	0	0	0	0	0	13.5		0	0	0	4.9	4.9						
STOP	0.4	0	0	0	0	0	0	13.6		0	0	0	4.9	4.9						
Ref No.	Q3006				Q3007				Q3009				Q3010				Q4004			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
REC	1.8	0	1.2		1.8	0	1.1		1.7	0	1.0		1.7	0	1.0		5.2	-0.8	5.2	
PLAY	1.8	0	1.2		1.8	0	1.2		1.7	0	1.0		1.7	0	1.0		5.2	-0.8	5.2	
STOP	1.8	0	1.2		1.8	0	1.2		1.7	0	1.0		1.7	0	1.0		5.2	5.1	4.5	
Ref No.	Q4006				Q4007				Q4008				Q4009				Q7401			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
REC	0	0	-0.1		0	0	-0.4		0	0	-0.1		0	0	-0.4		0	12.1	0	
PLAY	0	0	-0.2		0	0	-0.5		0	0	-0.1		0	0	-0.5		0	12.1	0.1	
STOP	0	0	0.7		0	0	0.7		0	0	0.7		0	0	0.7		0	12.1	0.1	
Ref No.	Q7402				Q7404				Q7405				Q7406				Q7503			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
REC	2.9	0	2.3		1.3	5.0	1.9		1.3	5.0	1.9		1.3	5.0	1.9		0	3.7	-1.0	
PLAY	2.9	0	2.3		1.3	5.0	1.9		1.3	5.0	1.9		1.3	5.0	1.9		0	3.5	-1.0	
STOP	2.9	0	2.2		1.3	5.0	1.9		1.3	5.0	1.9		1.3	5.0	1.9		0	3.5	-1.0	
Ref No.	Q7505				Q7506				Q7507				Q7508				Q7511			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
REC	2.5	0	1.9		2.0	5.0	1.6		2.5	0	1.9		2.0	5.0	1.6		0	4.9	0	
PLAY	2.5	0	1.9		2.0	5.0	1.6		2.5	0	1.9		2.0	5.0	1.6		0	4.9	0	
STOP	1.6	0	0.9		1.1	5.0	1.6		1.7	0	1.0		1.1	5.0	1.6		0	4.9	0	
Ref No.	Q7512				Q7517				Q7518				Q7519				QR3002			
MODE	1	2	3		E	C	B		E	C	B		E	C	B		E	C	B	
REC	0.4	13.5	0		0	0	0.6		0	4.3	0		0	3.5	0		0	2.8	0	
PLAY	0.4	13.5	0		0	0	0.6		0	4.3	0		0	3.5	0		0	2.8	0	
STOP	0.4	13.6	0		0	0	0.6		0	4.3	0		0	3.5	0		0	2.8	0	
Ref No.	QR3003				QR4002				QR4003				QR4004				QR4005			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
REC	0	2.8	0		0	0	4.9		0	0	2.5		0	5.2	0		0	5.2	0	
PLAY	0	2.8	0		0	0	4.9		0	0	2.5		0	5.2	0		0	5.2	0	
STOP	0	2.8	0		0	0	4.9		0	2.9	0		0	0	2.9		0	0	0	
Ref No.	QR4012				QR7401				QR7402				QR7403				QR7404			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
REC	5.2	0	5.1		0	3.3	0		0	4.7	0		0	0	4.7		12.1	-0.3	12.0	
PLAY	5.2	0	5.1		0	3.3	0		0	4.7	0		0	0.1	4.7		12.1	12.1	0.1	
STOP	5.2	0	5.1		0	3.3	0		0	4.7	0		0	0.1	4.7		12.1	-0.3	12.0	
Ref No.	QR7405				QR7501				QR7502				QR7503				QR7505			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
REC	0	12.0	0		4.9	0	4.9		0	0	2.3		0	1.0	0		0	4.9	0	
PLAY	0	0.1	4.9		4.9	0	4.9		0	0	2.3		0	1.0	0		0	4.9	0	
STOP	0	12.0	0		4.9	0	4.9		0	0	2.3		0	1.0	0		0	4.9	0	

[illegible]

ORDER NO.DSD0405013C3

DVD Video Recorder

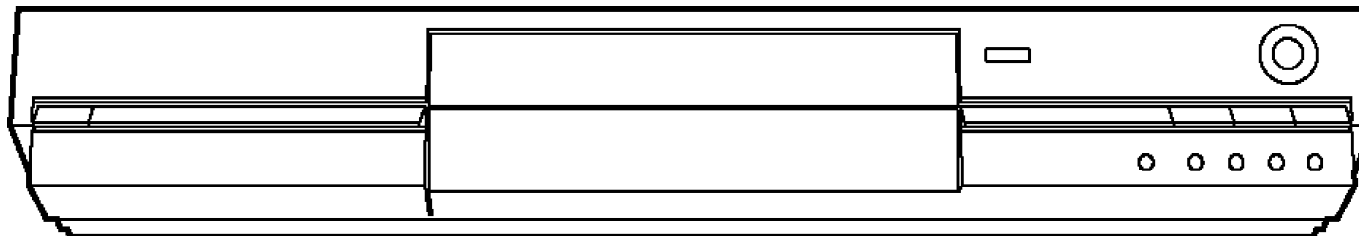
**DMR-E85HEE
DMR-E85HGCS**

DMR-E85HGN

Colour

(K).....Black Type

(S).....Silver Type



**Notes: The part of DVD Drive (VXY1814) is listed separately.
Please refer ORDER No. RAM0402001C0**

When replacing with Digital P.C.B. or HDD,
"UNFORMAT" indication is displayed and HDD must be formatted.

After that, programme in the HDD will be lost.

In detail, please refer to each content in this service manual.

SPECIFICATIONS

Specifications

Power supply	E85HEE,GC,GN	AC220-240 V, 50 Hz	Antenna reception system	E85HEE	
	E85HGCS	AC220-240 V, 50 Hz / 60 Hz		OIRT(PAL-DK, SECAM-DKK1)	VHF: CH R1 - CH R12 UHF: CH 21 - CH 69 CATV: CH 44MHz - 470MHz
Power consumption	38 W			CCIR(PAL-BGH, SECAM-BG)	VHF: CH E2-CH E12 UHF: CH E21 - CH E69 CATV: CH S01-S05, M1-M10, U1-U10, S21-S41
Recording system	DVD video recording format (DVD-RAM), DVD video format (DVD-R)			Hong kong (PAL-I)	UHF: CH 21 - CH 69
Optical pick-up	System with 1 lens, 2 integration units (658 nm wavelength for DVDs, 795 nm wavelength for CDs)			E85HGCS	
Recordable discs	<ul style="list-style-type: none">• 12 cm 4.7 GB DVD-RAM discs• 12 cm 9.4 GB DVD-RAM discs• 8 cm 2.8 GB DVD-RAM discs• 12 cm 4.7 GB DVD-RAM discs (Ver. 2.1/3X-SPEED DVD-RAM Revision 1.0)• 8 cm 1.4 GB DVD-R discs (for General Ver. 2.0)• 12 cm 4.7 GB DVD-R discs (for General Ver. 2.0)• 12 cm 4.7 GB DVD-R discs (for General Ver 2.0/ 4X-SPEED DVD-R Revision 1.0)			CCIR(PAL-BGH, SECAM-BG)	VHF: CH E2-CH E12 UHF: CH E21 - CH E69 CATV: CH S01-S05, M1-M10, S21-S41
				OIRT(PAL-DK, SECAM-DKK1)	VHF: CH R1-CH R12 UHF: CH 21 - CH 69 CATV: CH 44MHz - 470MHz
Recording time	<ul style="list-style-type: none">• Maximum 8 hours (using 4.7 GB disc) XP: Approx. 1 hours SP: Approx. 2 hours LP: Approx. 4 hours EP: Approx. 6 hours or 8 hours• Maximum 142 hours (with built in 80 GB HDD) XP: Approx. 17 hours SP: Approx. 34 hours LP: Approx. 68 hours EP: Approx. 106 hours or 142 hours			China (PAL-D)	VHF: CH 1 - CH 12 UHF: CH 13 - CH 57 CATV: CH Z1 - CH Z35
				Hong Kong (PAL-I)	UHF: CH 21 - CH 69
Region number	E85HEE	Region No.5		E85HGN	
	E85HGCS	Region No.3		Australia (PAL-B)	VHF: CH 0-CH 12 UHF: CH 28 - CH 69 CATV: CH 45MHz - 470MHz
	E85HGN	Region No.4		New Zealand (PAL-BG)	VHF: CH 1-CH 11 UHF: CH 21 - CH 69 CATV: CH 44MHz - 470MHz
<ul style="list-style-type: none">• 12 cm 4.7 GB DVD-RAM discs• 12 cm 9.4 GB DVD-RAM discs• 8 cm 2.8 GB DVD-RAM discs• 12 cm 4.7 GB DVD-RAM discs (Ver. 2.1/3X-SPEED DVD-RAM Revision 1.0)• 8 cm 1.4 GB DVD-R discs (for General Ver. 2.0)• 12 cm 4.7 GB DVD-R discs (for General Ver. 2.0)			RF Converter Output	Not provided	
			Audio system		
			Recording system	Dolby Digital 2ch, Linear PCM (XP mode, 2 ch)	
			Analog Input	AV1/AV2(21pin x 2), AV3/AV4(pin jack x 2) Standard input: 0.5 Vrms	

Discs played	<ul style="list-style-type: none">• 12 cm 4.7 GB DVD-R discs (for General Ver. 2.0)• 12 cm 4.7 GB DVD-R discs (for General Ver 2.0/ 4X-SPEED DVD-R Revision 1.0)• DVD-VIDEO discs• DVD-Audio discs• CD-Audio discs (CD-DA)• Video CD discs• CD-R/ CD-RW discs (CD-DA, Video CD, MP3 formatted discs)		Analog Input	Standard input: 0.5 Vrms Full scale: 2.0 Vrms at 1KHz Input impedance: More than 10KΩ
			Analog Output	AV1/AV2(21pin x 2), LINE(pin jack x 1) Standard output: 0.5 Vrms Full scale: 2.0 Vrms at 1KHz Output impedance: Less than 1.0KΩ
			Number of channels	Recording: 2 channels Playback: 2 channels
Built-in HDD Capacity	80 GB		Digital Output	Digital Audio Optical Output Connector (PCM,Dolby Digital,DTS,MPEG)
Drive Unit	High Speed Drive (correspond to 4 times speed with DVD-R disc and 3 times speed with DVD-RAM disc)		Dimensions	Approx. 430 (W) x 79 (H) x 274 (D) mm [Approx. 16 15/16" (W) x 3 1/8" (H) x 10 13/16" (D)] (excluding protrusions)
Video system				
TV system	E85HEE	SECAM(Only Input)/PAL system, 625 lines, 50 fields /NTSC system, 525 lines, 60 fields	Mass	Approx. 4.4 kg (9.70 lbs)
	E85HEGCS,GN	PAL system, 625 lines, 50 fields /NTSC system, 525 lines, 60 fields	Operating temperature	5°C - 40°C (41 F - 104 F)
			Operating humidity range	10 %-80 % RH (no condensation)
Recording system	MPEG2 (Hybrid VBR)		Clock unit	Quartz-controlled 12-hour digital display
Video Input (※): E85HEE Only	Video In: (SECAM(※)/PAL/NTSC)	AV1/AV2(21pin x 2), AV3/AV4(pin jack x 2) 1.0Vp-p ; 75Ω	LASER Specification (Class I LASER Product)	
	S-Video In: (SECAM(※)/PAL/NTSC)	AV2(21pin), AV3/AV4(S connector x 2) Y:1.0Vp-p ; 75Ω, C:0.3Vp-p ; 75Ω	Wave length	795 nm, 658 nm
	RGB In(PAL):	AV2(21pin) 0.7Vp-p ; 75Ω	Laser power	No hazardous radiation is emitted with the safety protection.
			Power consumption in standby mode	approx. 3.0 W
Video Output	Video Out: (PAL/NTSC)	AV1/AV2(21pin x 2), LINE(pin jack x 1) 1.0Vp-p ; 75Ω	Solder	These model use lead free solder (PbF).
	S-Video Out: (PAL/NTSC)	AV1(21pin), S connector x 1 Y:1.0Vp-p ; 75Ω, C:0.3Vp-p ; 75Ω		
	RGB Out: (PAL)	AV1(21pin), 0.7Vp-p ; 75Ω		
	Component video out: (NTSC 480P/480I)	Y: 1.0Vp-p ; 75Ω(pin jack) PB: 0.7Vp-p ; 75Ω(pin jack) PR: 0.7Vp-p ; 75Ω(pin jack)		

	400P/400P (PAL 576P/576I)	FM. 0.7 Vp-p , 75Ω (pin jack)		
--	------------------------------	-------------------------------	--	--

Notes : Mass and dimensions are approximate.
Specifications are subject to change without notice.

1

Panasonic

1. Safety precautions

1.1. General guidelines

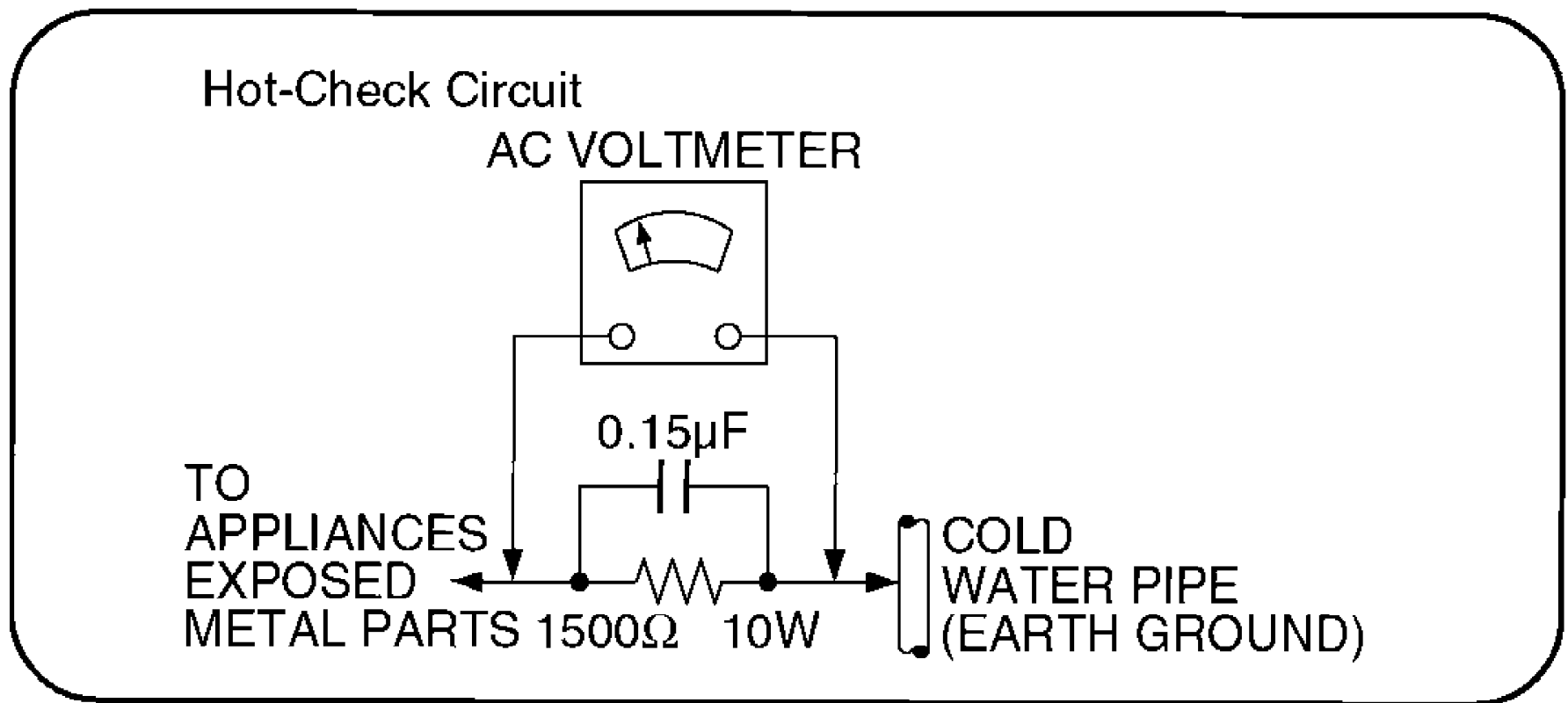
1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

1.1.1. Leakage current cold check

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1M Ω and 5.2M Ω .

When the exposed metal does not have a return path to the chassis, the reading must be ∞ .

Figure 1



1.1.2. Leakage current hot check

(See [Figure 1](#) .)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5k Ω , 10 watts resistor, in parallel with a 0.15 μ F capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in [Figure 1](#) .

3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliampere. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.


2. Prevention of Electrostatic Discharge (ESD) to Electrostatic Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatic Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistor-semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electrostatic discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static (ESD protected)" can generate electrical charge sufficient to damage ES devices.

5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
Caution
Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device).

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by  in the schematic diagrams, Exploded Views and replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

3. Precaution of Laser Diode

CAUTION:

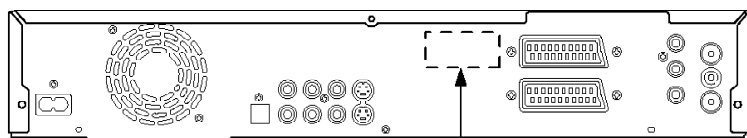
This product utilizes a laser diode with the unit turned “on”, invisible laser radiation is emitted from the pickup lens.

Wave length: 795 nm/658 nm

Maximum output radiation power from pickup: 100 μ W/VDE

Laser radiation from the pickup lens is safety level, but be sure the followings:

1. Do not disassemble the optical pickup unit, since radiation from exposed laser diode is dangerous.
2. Do not adjust the variable resistor on the pickup unit. It was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pickup lens for a long time.



LUOKAN 1 LASERLAITE
KLASS 1 LASER APPARAT

CLASS 1
LASER PRODUCT

ACHTUNG:

Dieses Produkt enthält eine Laserdiode.

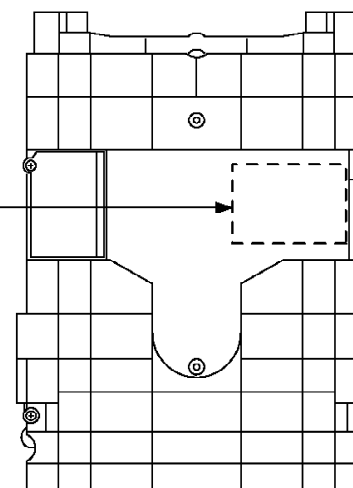
Im eingeschalteten Zustand wird unsichtbare Leserstrahlung von der Lasereinheit adgestrahlt.

Wellenlänge: 795 nm/658 nm

Maximale Strahlungsleistung der Lasereinheit: 100 μ W/VDE

Die Strahlungen der Lasereinheit ungefährlich, wenn folgende Punkte beachtet werden:

1. Die Lasereinheit nicht zerlegen, da die Strahlung an der freigelegten Laserdiode gefährlich ist.
2. Den werkseitig justierten Einstellregler der Lasereinheit nicht verstellen.
3. Nicht mit optischen Instrumenten in die Fokussierlines blicken.
4. Nicht über längere Zeit in die Fokussierlines blicken.



DANGER	- VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM. (FDA 21 CFR)
CAUTION	- VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM. (IEC60825-1)
ATTENTION	- RAYONNEMENT LASER VISIBLE ET INVISIBLE EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE AU FAISCEAU.
ADVARSEL	- SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARO!	- AVATTAESSA OLET ALTTIINA NÄKYVÄÄ JA NÄKYMÄTÖN LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING	- SYNIG OCH OSYNIG LASERSTRÅLING NÄR DENNA DEL ÄR ÖPPNAD. BETRÄKTA EJ STRÅLEN.
ADVARSEL	- SYNLIG OG USYNLIG LASERSTRÅLING NÄR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN.
VORSICHT	- SICHTBARE UND UNSICHTBARE LASERSTRÄHLUNG, WENN ABDECKUNG GEOFFNET. NICHT DEM STRAHL AUSSETZEN.
注意	- 打开时有可见及不可见激光辐射。避免激光束照射。
注意	- ここを開くと可視及び不可視のレーザー光が出ます。 ビームを直接見たり、照れたりしないでください。 RQLS0233

CAUTION!

THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN
THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

4. Handling the Lead-free Solder

4.1. About lead free solder (PbF)

Distinction of PbF P.C.B.:

P.C.B.s (manufactured) using lead free solder will have a PbF stamp on the P.C.B.

Caution:

- Pb free solder has a higher melting point than standard solder; Typically the melting point is 50 - 70°F (30 - 40°C) higher. Please use a high temperature soldering iron. In case of the soldering iron with temperature control, please set it to $700 \pm 20^\circ\text{F}$ ($370 \pm 10^\circ\text{C}$).
- Pb free solder will tend to splash when heated too high (about 1100°F/600°C).
- When soldering or unsoldering, please completely remove all of the solder on the pins or solder area, and be sure to heat the soldering points with the Pb free solder until it melts enough.

5. Each Buttons



6. Taking out the Disc from RAM-Drive Unit when the Disc cannot be ejected by OPEN/CLOSE button

6.1. Forcible Disc Eject

6.1.1. When the power can be turned off.

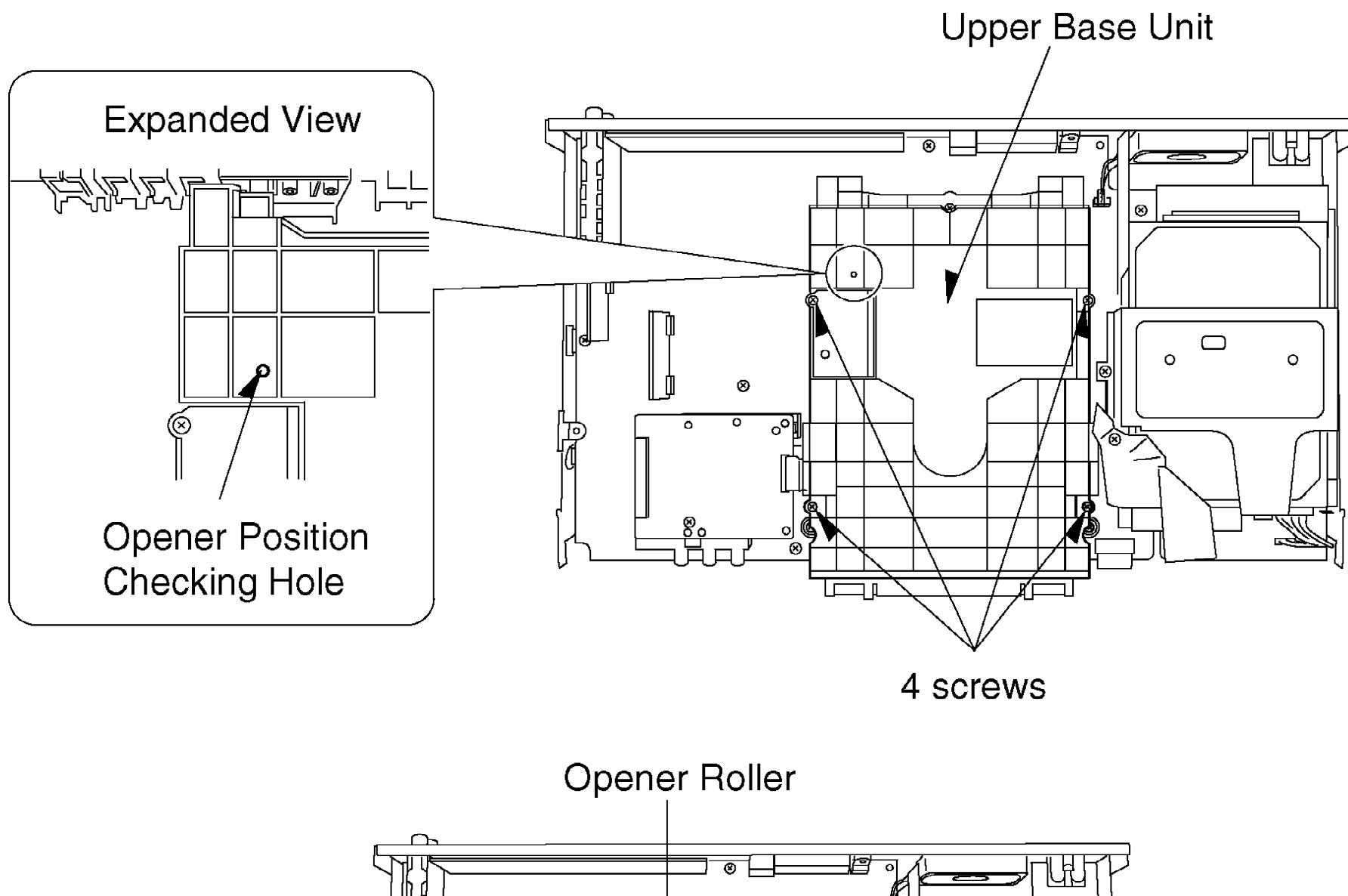
1. Turn off the power and press [STOP] [CH UP] keys on the front panel simultaneously for 5 seconds.

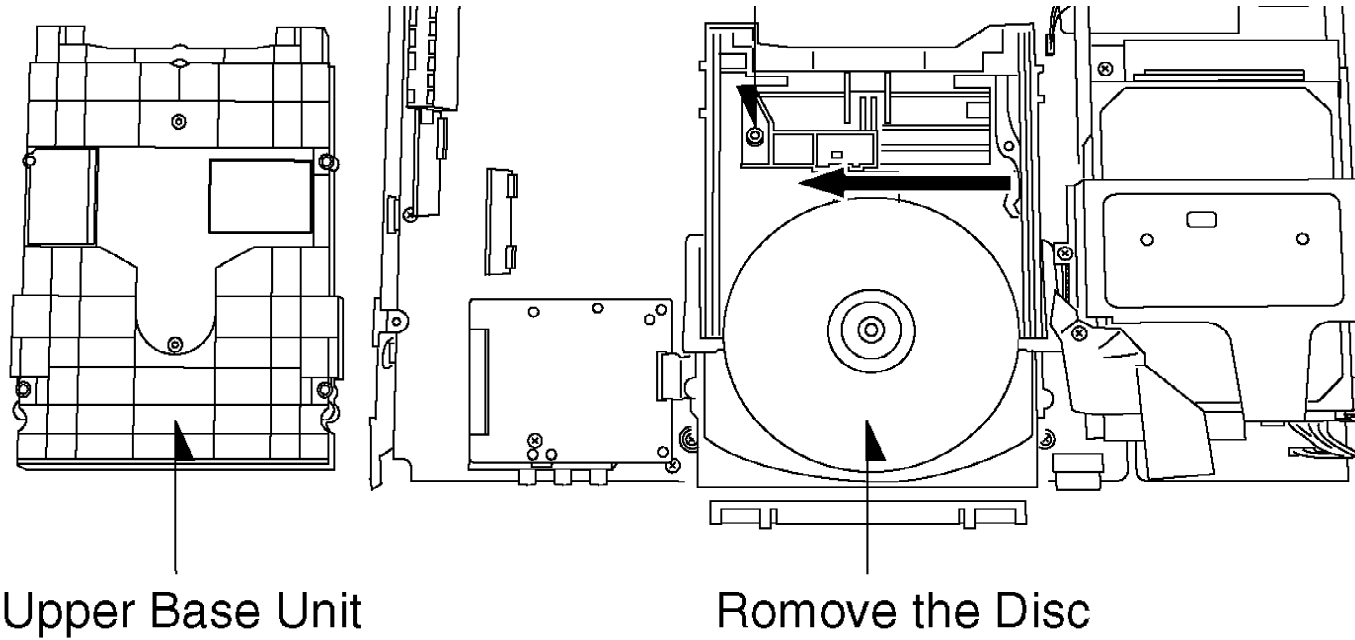
6.1.2. When the power can not be turned off.

1. Press [POWER] key on the front panel for over 10 seconds to turn off the power forcibly, and press [STOP] [CH UP] keys on the front panel simultaneously for 5 seconds.

6.2. When the Forcible Disc Eject can not be done.

1. Turn off the power and pull out AC cord.
2. Remove the Top Case.
3. Remove the Front Panel.
4. Remove 4 screws and Upper Base Unit from DVD-RAM Drive.
5. Take out the disc and put the Opener Roller on fully position for direction of Arrow.
6. Put the Upper Base Unit so that the Opener Roller is inserted into the groove.
7. Check center of Opener Roller is seen through the Opener position Checking Hole, and tighten 4 screws.





7. Service Explorer

Confirm “RAM-Drive Last Error” in Service Mode

Execute Service Mode

1. Press [STOP], [TIME SLIP] and [OPEN/CLOSE] simultaneously for 5 seconds when P-off.
FL Display:

SERVICE MODE

***After finishing display “(7). Factor of Drive Error occurring”, press [0] [2] ~[9] [9] keys of the Remote Controller so that 99 memories can be displayed as maximum.**

2. Press [4] [2] keys of remote controller.

Example of FL Display:

(1) Error Number is displayed for 5 seconds.

NO 01

(2) Time when the error has occurred is displayed for 5 seconds.

40216191526

The error has occurred at 2004(year)/Feb.(month)/16(day)/19(hour):15(minute):26(second)

(3) Last Drive Error (1/2) is displayed for 5 seconds.



When above error codes are displayed, confirm operation with Panasonic RAM disc or Panasonic DVD-R disc.

***If the operation is OK, judge the error is due to media.**

***If the operation is NG and symptom as BLOCK NOISES and so on that are particular symptom of Digital appears, judge the error is due to RAM-Drive or Digital PCB.**

(4) Last Drive Error (2/2) is displayed for 5 seconds.

00 13 00 00

*This error code is unnecessary for service.

(5) Error occurring Disc type is displayed for 5 seconds.

MEDIADVDR

Disc type

*The error disc cannot be specified, display as "DVD".

(6) Disc Maker's ID is displayed for 5 seconds.

MXL R 061

**Example of Disc Maker's ID:
DVD-R Disc**

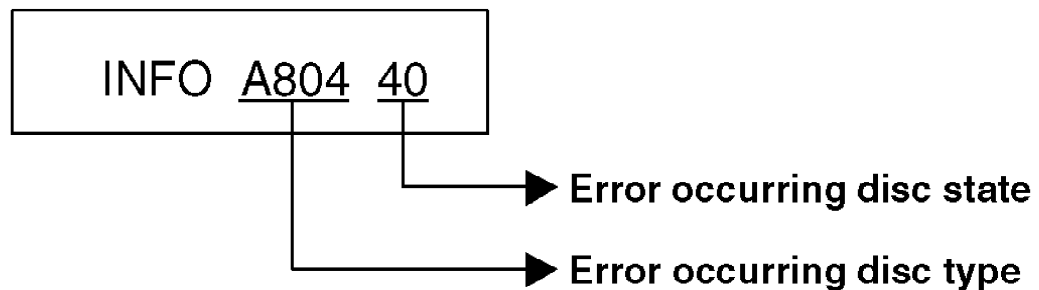
No.	FL Display (Disc Maker's ID)	Disc Maker	Country
1	MEI	Panasonic	Japan
2	PVC	Pioneer	Japan
3	MCC	Mitsubishi Chemical Corporation	Japan
4	TDK	TDK	Japan
5	MXL	Maxell	Japan
6	MCI	MITUI CHEMICALS	Japan
7	JVC	Victor JVC	Japan
8	TAIYOYUDEN TYG	Taiyo yuden	Japan
9	GSC	Giga Storage	Taiwan
10	PRODISC	Prodisc	Taiwan
11	PRINCO	PRINCO	Taiwan
12	RITEK	RITEK	Taiwan
13	OPTDISC	OPTDISC	Taiwan
14	LEAD DATA	LEAD DATA	Taiwan
15	CMC	CMC	Taiwan
16	AUVISTAR	AUVISTAR	Taiwan
17	ACER	Acer	Taiwan
18	VIVASTAR	VIVASTAR	Switzerland
19	LGE	LG Electronics	Korea

DVD-RAM Disc

No.	FL Display (Disc Maker's ID)	Disc Maker	Country
1	MEI	Panasonic	
2	MATSUSHITA	Panasonic	Japan
3	MXL	Maxell	Japan
4	PRODISC	Prodisc	Taiwan
5	OPTDISC	OPTDISC	Taiwan
6	CMC	CMC	Taiwan

*Since an display is arbitrarily set up by the disk producer side, the above-mentioned display may be changed.
Please make it reference as an example of a display.

(7) Factor of Drive Error occurring is left displayed



Error Occurring Disc Type

FL Display	Disc Type
00	DVD-ROM/Video
01	Audio-CD
02	2.6GB DVD-RAM
03	4.7GB DVD-RAM
04	DVD-R

Error Occurring Disc State

FL Displays (Hexadecimal)	Description			
	Disc distinction state	Cartridge disc state	Cartridge disc state	Disc size
00	OK	With cartridge	Has not been opened yet.	12 cm
10	OK	With cartridge	Has not been opened yet.	8 cm
20	OK	With cartridge	Has been opened.	12 cm
30	OK	With cartridge	Has been opened.	8 cm
40	OK	Bare	Has not been opened yet.	12 cm
50	OK	Bare	Has not been opened yet.	8 cm
60	OK	Bare	Has been opened.	12 cm
70	OK	Bare	Has been opened.	8 cm
80	NG	With cartridge	Has not been opened yet.	12 cm
90	NG	With cartridge	Has not been opened yet.	8 cm
A0	NG	With cartridge	Has been opened.	12 cm
B0	NG	With cartridge	Has been opened.	8 cm
C0	NG	Bare	Has not been opened yet.	12 cm
D0	NG	Bare	Has not been opened yet.	8 cm
E0	NG	Bare	Has been opened.	12 cm
F0	NG	Bare	Has been opened.	8 cm

8. Self-Diagnosis and Special Mode Setting

8.1. Self-Diagnosis Functions

Self-Diagnosis Function provides information for errors to service personnel by “Self-Diagnosis Display” when any error has occurred.

U14, H** and F** are stored in memory and held.

Display on FL will be cancelled when the power is turned off or AC input is turned off during self-diagnosis display is ON.

Error Code	Diagnosis contents	Description	Monitor Display	FL display
U12	Remote control code error	Display appears when main unit and remote controller codes are not matched.	No display	<div>REMOTE DVD*</div> <p>“*” is remote controller code of the main unit. Display for 5 seconds.</p>

Error Code	Diagnosis contents	Description	Monitor Display	FL display
U14	Abnormal inner temperature detected	Display appears when the drive temperature exceeds 70°C. The power is turned off forcibly. For 30 minutes after this, all key entries are disabled. (Fan motor operates at the highest speed for the first 5 minutes. For the remaining 25 minutes, fan motor is also stopped.) The event is saved in memory as well.	No display	<div>U14</div> <p>“U14” is displayed for 30 minutes.</p>
U99	Hang-up	Displayed when communication error has occurred between Main microprocessor and Timer microprocessor.	No display	<div>U99</div> <p>Displayed is left until the [POWER] key is pressed.</p>
H01	Inoperative fan motor	Display appears when inoperative fan motor is detected after powered on. The power is turned off when detecting.	No display	<div>H01</div> <p>Displayed is left.</p>
F00	No error information	Initial setting for error code in memory (Error code Initialization is possible with error code initialization and main unit initialization.)	No display	<div>F00</div> <p>Displayed is left.</p>

Error Code	Diagnosis contents	Description	Monitor Display	FL display
F01	Drive hardware error	Display appears when drive unit error is detected. The event is saved in memory.	No display	<div>F01</div> <p>Displayed is left.</p>
F12	Initialization error when main microprocessor is started up for program recording	Display appears when initialization error is detected after starting up main microprocessor for program recording. The event is saved in memory. The power is turned off when detecting.	No display	<div>F12</div> <p>Displayed is left.</p>
UNSUPPORT	Unsupported disc error	*An unsupported format disc was played, although the drive starts normally. *The data format is not supported, although the media type is supported. *Exceptionally incase of the disc is dirty.	"This disc is incompatible."	<div>UNSUPPORT</div> <p>Display for 5 seconds.</p>
NO READ	Disc read error	*A disc is flawed or dirty. *A poor quality failed to start. *The track information could not be read.	"Cannot read. Please check the disc."	<div>NOREAD</div>
HARD ERR	Drive error	The drive detected a hard error.	"DVD drive error."	<p>Display for 5 seconds.</p> <div>HARD ERR</div>

Error Code	Diagnosis contents	Description	Monitor Display	FL display
SELF CHECK	Restoration operation	<p>Since the power cord fell out during a power failure or operation, it is under restoration operation.</p> <p>*It will OK, if a display disappears automatically. If a display does not disappear, there is the possibility that defective Digital P.C.B. / RAM drive.</p>	No display	SELF CHECK
Full Program	32 programs are already set.	32 programs are already set.	No display	PROG FULL
HDD SLEEP	In order to extend HDD life, the HDD is in SLEEP (not activated) mode.	<p>If there is no disc in the unit, the HDD will go into SLEEP mode after there has been no operation for 30 minutes or longer.</p> <p>*While in SLEEP mode play or recording may not begin rightaway because the HDD takes time to be re-activated.</p>	"HDD SLEEP" is displayed for 3 seconds.	HDD SLP

8.2. Special Modes Setting

Item		FL display	Key operation
Mode name	Description		Front Key
TEST Mode	*All the main unit's parameters (include tuner) are initialized.	TEST AV1	Press [SKIP (REV)], [TIME SLIP] and [OPEN/CLOSE] keys simultaneously for five seconds when power is off.
Service Mode	Setting every kind of modes for servicing. *Details are described in "8. 3. Service Mode".	SERVICE MODE	When the power is off, press [STOP], [TIME SLIP] and [OPEN/CLOSE] keys simultaneously for 5 seconds.
Rating password	The audiovisual level setting password is initialized to "Level 8".	INIT	Open the tray, and press [SKIP (REV)] and [SKIP (FWD)] simultaneously for five seconds.
Forced disc eject	Removing a disc that cannot be ejected. The tray will open and unit will shift to P-off mode. *When Timer REC is ON or EXT-LINK is ON, execute " Forced disc eject " after releasing TimerREC or EXT-LINK. *This command is not effective during "Child lock" is ON.	The display before execution leaves. *****	When the power is off, press [STOP] and [CH UP] keys simultaneously for five seconds.
Child lock/unlock	Set or release "Child Lock".	X HOLD	Press [ENTER] and [RETURN] by remote controller simultaneously until [X-HOLD] is displayed

			displayed.
Item		FL display	Key operation
Mode name	Description		Front Key
NTSC/PAL system select	To switch PAL/ NTSC alternately.	<p>The display before execution leaves.</p> <div>*****</div>	When the power is on (E-E mode), press [STOP] and [OPEN/CLOSE] simultaneously for five seconds.
Forced power-off	<p>When the power button is not effective while power is ON, turn off the power forcibly.*When Timer REC is ON or EXT-LINK is ON, execute “Forced Power-off” after releasing Timer REC or EXT-LINK.</p> <p>Action: The tray will open, and the power will turn off.</p>	Display in P-off mode.	Press [Power] key over than 10 seconds.

Item		FL display	Key operation
Mode name	Description		Front Key
Aging	Perform sequence of modes as * Aging Description shown below continually.	Display following the then mode.	When the power is ON, press [CH DOWN], TIME SLIP] and [OPEN / CLOSE] simultaneously for over five seconds and less than 10 seconds. *The [REC MODE] should be set to EP or LP. *When the unit has hung-up because of pressing keys for over 10 seconds, once turn off the power, and re-execute this command. “When releasing Aging mode, press [POWER] key.

Item		FL display	Key operation
Mode name	Description		Front Key
Demonstration lock/unlock	Ejection of the disc is prohibited. The lock setting is effective until unlocking the tray and not released by “Main unit initialization” of service mode.	*When lock the tray. <div>LOCK</div> “LOCK” is displayed for 3 seconds.	When the power is on, press [STOP] and [POWER] keys simultaneously for five seconds.
		*When unlock the tray. <div>UNLOCK</div> “UNLOCK” is displayed for 3 seconds.	When the power is on, press [STOP] and [POWER] keys simultaneously for five seconds.
		*When press OPEN/CLOSE key while the tray being locked. <div>LOCK</div> Display “LOCK” for 3 seconds.	Press [OPEN/CLOSE] key while the tray being locked.
ATP re-execution	Re-execute ATP.	Display at ATP executing. <div>*****</div>	When the power is on (E-E mode), press [CH UP] and [CH DOWN] simultaneously for five seconds.

Item		FL display	Key operation
Mode name	Description		Front Key
Progressive initialization	The progressive setting is initialized to Interlace.	The display before execution leaves. <div>*****</div>	When the power is on (E-E mode), press [STOP] and [TIME SLIP] simultaneously for five seconds.

Aging Contents (Example):

Format→REC→Play→STOP→Play→Skip(R)→Cue

↑


Stop←Play←R-Slow←Slow←Pause←Play←Rev

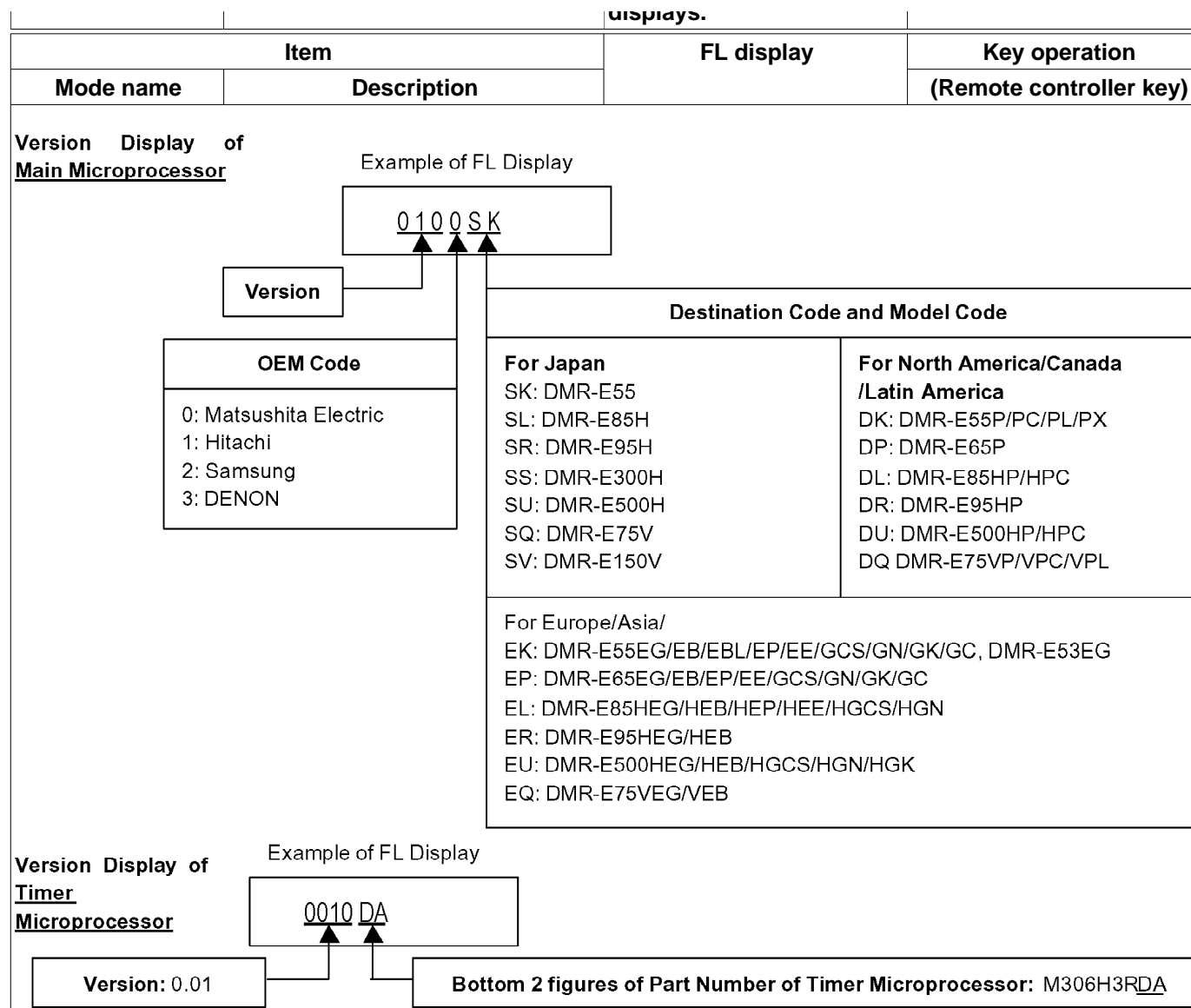
↓

*The unit repeats above sequence.

8.3. Service Modes

Service mode setting: While the power is off, press TIME SLIP, STOP and OPEN / CLOSE simultaneously for five seconds.

Item		FL display	Key operation
Mode name	Description		(Remote controller key)
Release Items	Item of Service Mode executing is cancelled.	SERVICE MODE	Press [0] [0] or [Return] in service mode.
Error Code Display	Last Error Code of U14/H/F held by Timer is displayed on FL. *Details are described in “8. 1. Self-Diagnosis Functions”.	<div>♣ □ □</div> <div>* ♣ shows U/H/F. □ □ shows number.</div>	Press [0] [1] in service mode
ROM Version Display	Region code, MAIN firm version, TIMER firm version and DRIVE firmware versions are displayed on FL for five seconds per each version in order, but ROM version will be left displayed.	<div>REGION*</div> <div>MAIN *****</div> <div>TIMER*****</div> <div>DRIVE ****</div> <div>ROM * ***</div> <div>  “ ”are version displays. </div>	Press [0] [2] in service mode



Item		FL display	Key operation
Mode name	Description		(Remote controller key)
White Picture Output	White picture is output as component Output from AV Decoder. *White picture (Saturation rate : 100%) *It is enable to switch Interlace/Progressive by "I/Pswitch: [1] [4]"	*Initial mode is "Interlace". <div>WHIT I</div>	Press [1] [1] in service mode.
		Switch Interlace/Progressive <div>WHIT P</div>	Press [1] [4] in White Picture Output mode. *I/P are switched alternately.
Magenta Picture Output	Magenta picture is output with Component Output from AV Decoder. *Magenta picture (Saturation rate: 100%) *It is enable to switch Interlace/Progressive by "I/Pswitch: [1] [4]"	*Initial mode is "Interlace". <div>MAGE I</div>	Press [1] [2] in service mode.
		Switch Interlace/Progressive <div>MAGE P</div>	Press [1] [4] in Magenta Picture Output mode. *I/P are switched alternately.

Item		FL display	Key operation
Mode name	Description		(Remote controller key)
RTSC Return in XP (A & V)	AV1 input signal is encoded (XP), decoded (XP) and output decoded signal to external without DISC recording and DISC playback.	Initial mode: EE2/ Interlace / XP/ Audio 48kHz EE2 I XP 48	Press [1] [3] in service mode.
		Switch Interlace/ Progressive EE2 P XP 48	Press [1] [4] in RTSC Return XP mode. *I/P are switched alternately.
		Audio 44.1 kHz/ 48 kHz Switch EE2 P XP 44	Press [2] [4] in RTSC Return XP mode. *48 kHz / 44.1 kHz are switched alternately.
I/P Switch	Switch Interlace and Progressive in EE mode. *Initial setting is "Interlace". *This command is effective during executing "White Picture Output", "MagentaPicture Output" and "RTSC Return in XP (A & V)" modes.	Initial mode is Interlace SERVICE I Switch Interlace/ Progressive SERVICE P	Press [1] [4] in I/P Switch mode. *I/P are switched alternately.

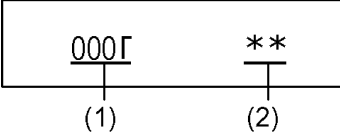
Item		FL display	Key operation
Mode name	Description		(Remote controller key)
Audio Mute (XTMUTE)	Check whether mute is applied normally by the timer microprocessor.	TIMER MUTE	Press [2] [1] in service mode.
Audio Mute (XDMUTE)	Check whether mute is applied normally by the Digital P.C.B. (GLUE IC).	MAIN MUTE	Press [2] [2] in service mode.
Audio Pattern Output	The audio pattern stored in the internal memory is output (Lch: 1kHz/-18dB) (Rch: 400Hz/-18dB) *Audio sound clock switching operation of DAC can be confirmed by sub command [2] [4].	Initial mode (Audio 48kHz)	Press [2] [3] in service mode.
		Audio 44.1kHz/48kHz switching	Press [2] [4] in Audio Pattern Output mode. *48 kHz / 44.1 kHz are switched alternately.

Item		FL display	Key operation
Mode name	Description		(Remote controller key)
HDD READ inspection	Perform a complete read inspection of the HDD.	<p>When the HDD is OK</p> <div>HDD RDOK</div> <p>If the HDD is defective</p> <div>HDD RDNG□○○</div> <p>□ : Judge of Forward rate. *When normal (Forward rate is 35Mbps or more, and there is no HDD error): □ is Space. *When Abnormal (Forward rate is less than 35Mbps): □ is X. ○○ : Number of what have spent time for seeking over 100ms. *When normal: ○○ are spaces. *When Abnormal: Display Number of what have spent time for seeking over 100ms. However, if the number is more than 100, Display [XX]. We judge it is normal that the number is less than 4.</p>	<p>Press [3] [1] in the service mode.</p> <p>*When canceling the checking mode while executing, do "forced power-off".</p> <p>Method: Press the "POWER" button on the Front Panel more than 10 seconds.</p>

Item		FL display	Key operation
Mode name	Description		(Remote controller key)
Laser Used Time Indiction	Check laser used time (hours) of drive.	<div>LASER*****</div> <p>● (*****) is the used time display in hour. ● Laser used time ofDVD/CD in Playback/Recording mode is counted.</p>	Press [4] [1] in service mode.
Delete the Laser Used Time	Laser used time stored in the memory of the unit is deleted.	<div>CLR LASER</div>	Press [9] [5] in service mode.

Item		FL display	Key operation
Mode name	Description		(Remote controller key)
RAM Drive Last Error	<p>RAM Drive error code display.</p> <p>*For details about the drive error code, refer to the Service Manual for the specific RAM Drive.</p> <p>*Details are described in “7. Service Explorer”.</p>	<p>1. Error Number is displayed for 5 seconds.</p> <div>NO **</div> <p>2. Time when the error has occurred is displayed for 5 seconds.</p> <div>YMMDDhhmmss</div> <p>Y: Year MM: Month DD: Day hh: Hour mm: Minute ss: Second</p> <p>3. Last Drive Error (1/2) is displayed for 5 seconds.</p> <div>*****</div> <p>4. Last Drive Error (2/2) is displayed for 5 seconds.</p> <div>.</div>	<p>Press [4] [2] in service mode.</p> <p>Then press [0] [1] ~ [9] [9], the past 99 errors are displayed.</p>

	<div>*****</div> <div>5. Error occurring Disc type is displayed for 5 seconds.</div> <div>MEDIA*****</div> <div>6. Disc Maker ID is displayed for 5 seconds.</div> <div>*****</div> <div>7. Factor of Drive Error occurring is left displayed</div> <div>INFO*****</div>	<div>Incase that the supplier cannot be identified, display is black out.</div>
--	--	---

Item		FL display	Key operation
Mode name	Description		(Remote controller key)
Delete the Last Drive Error	Delete the Last Drive Error information stored on the DVD RAM-Drive.	CLR DRIVE	Press [9] [6] in service mode.
Turn on all FL/LEDs	All segments of FL and all LEDs are turned on.	All segments are turned on.	Press [5] [1] in service mode.
PB HIGH Signal Output	8 pin of AV 1 Jack (PB HIGH terminal) is High (approx. 11V DC).	PB8 HIGH	Press [5] [2] in service mode.
PB MIDDLE Signal Output	8 pin of AV 1 Jack (PB HIGH terminal) is Middle (approx. 5.5V DC).	PB8 MIDDLE	Press [5] [3] in service mode.
Front connection inspection	Press all front keys and check the connection between Main P.C.B. and Front P.C.B.	 <p>(1) Each time a key is pressed, segment turned on increases one by one. (2) Total number of keys that have been pressed.</p>	Press [5] [4] in service mode.

Item		FL display	Key operation
Mode name	Description		(Remote controller key)
Production Date Display	Display the date when the unit was produced.	<div>PD YYYYMMDD</div> <div> YYYY: Year MM: Month DD: Day </div>	Press [6] [1] in service mode.
Display the accumulated working time	Display the accumulated unit's working time.	<div>*****</div> <div>(Indicating unit: Second)</div>	Press [6] [4] in service mode.

Item		FL display	Key operation
Mode name	Description		(Remote controller key)
Display the Error History	Display the Error History stored on the unit.	Display reason of error for 5 seconds.	Press [6] [5] in service mode. Then press [0] [1] ~ [1] [9], the past 19 error histories are displayed.
		FTREC***	
		Display the time when the error has occurred for 5 seconds..	
		YYMMDDHHMM	
		YY: Year MM: Month DD: Day HH: Hour MM: Minute Display the accumulated working time to occurring of the error for 5 seconds..	

		(Indicating unit: Second)	

Item		FL display	Key operation
Mode name	Description		(Remote controller key)
Delete the Error History	Delete Error History information stored on the unit.	CLR FTREC	Press [9] [7] in service mode.
AV4(V)/AV1(RGB) I/O Setting	Set input to AV4(V) and set output to AV1(RGB) for I/O checking	AV4V-AV1RGB	Press [8] [0] in service mode.
AV2(Y/C)/AV1(V) I/O Setting	Set input to AV2(Y/C) and set output to AV1(V) for I/O checking	AV2YC-AV1V	Press [8] [1] in service mode.
AV2(V)/AV1(Y/C) I/O Setting	Set input to AV2(V) and set output to AV1(Y/C) for I/O checking	AV2V-AV1 YC	Press [8] [2] in service mode.
AV2(RGB)/AV1(V) I/O Setting	Set input to AV2(RGB) and set output to AV1(V) for I/O checking	AV2RGB-AV1V	Press [8] [3] in service mode.

Item		FL display	Key operation
Mode name	Description		(Remote controller key)
P50 (H) Output	Timer Microprocessor IC7501-22 output High signal for AV1-pin 10 passing through inverter (approx. 0V DC at AV1-pin 10).	P50 HIGHOUT	Press [8] [4] in service mode.
		When OK.	
		P50 HIGH OK	
		When NG.	
P50 (L) Output	Timer Microprocessor IC7501-22 output Low signal for AV1-pin 10 passing through inverter (approx. 4.4 V DC at AV1-pin 10).	P50 HIGH NG	Press [8] [5] in service mode.
		P50 LOW OUT	
		When OK.	
		P50 LOW OK	
		When NG.	
		P50 LOW NG	

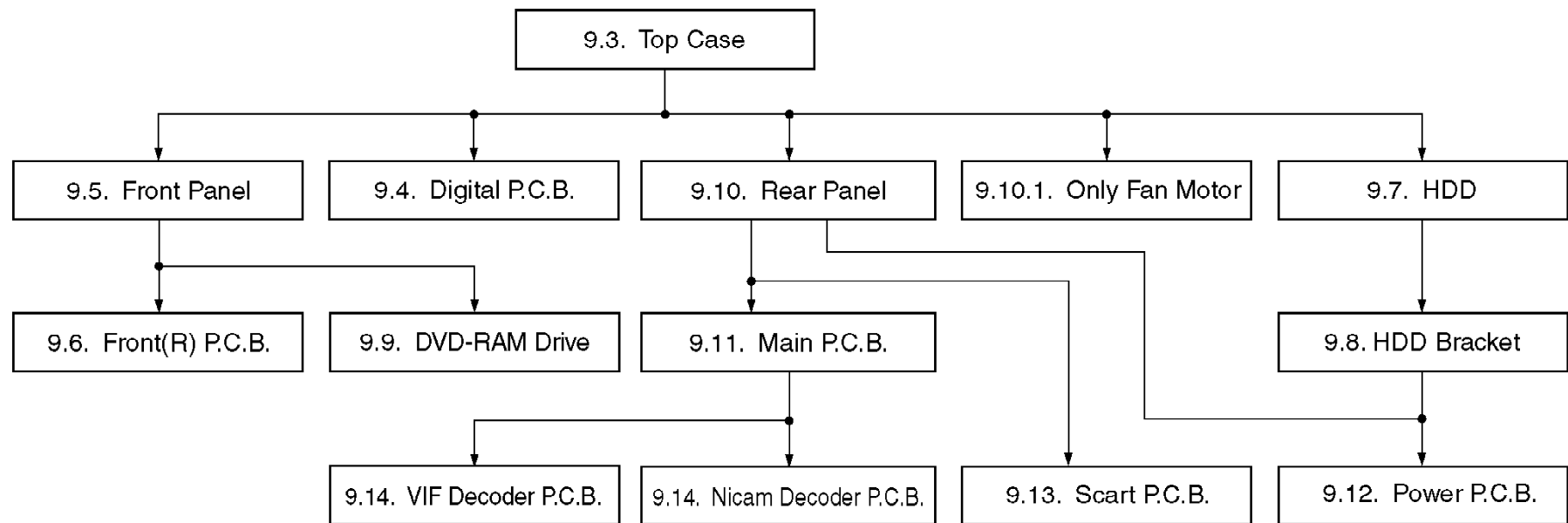
Item		FL display	Key operation
Mode name	Description		(Remote controller key)
Tray OPEN/ CLOSE Test	The RAM drive tray is opened and closed repeatedly.	<div>NO*****</div> <p>“*” is number of open/ close cycle times.</p>	Press [9] [1] in service mode *When releasing this mode, press the [POWER] button on Front Panel more than 10 seconds.
Error code initialization	Initialization of the last error code held by timer (Write in F00)	<div>CLR E-CODE</div>	Press [9] [8] in service mode.
Initialize Service	Last Drive Error, Error history and Error Codes stored on the unit are initialized to factory setting.	<div>CLR SERV</div>	Press [9] [9] in service mode.
Finishing service mode	Release Service Mode.	<p>Display in STOP (E-E) mode.</p> <div>*****</div>	Press power button on the front panel in service mode.

9. Assembling and Disassembling

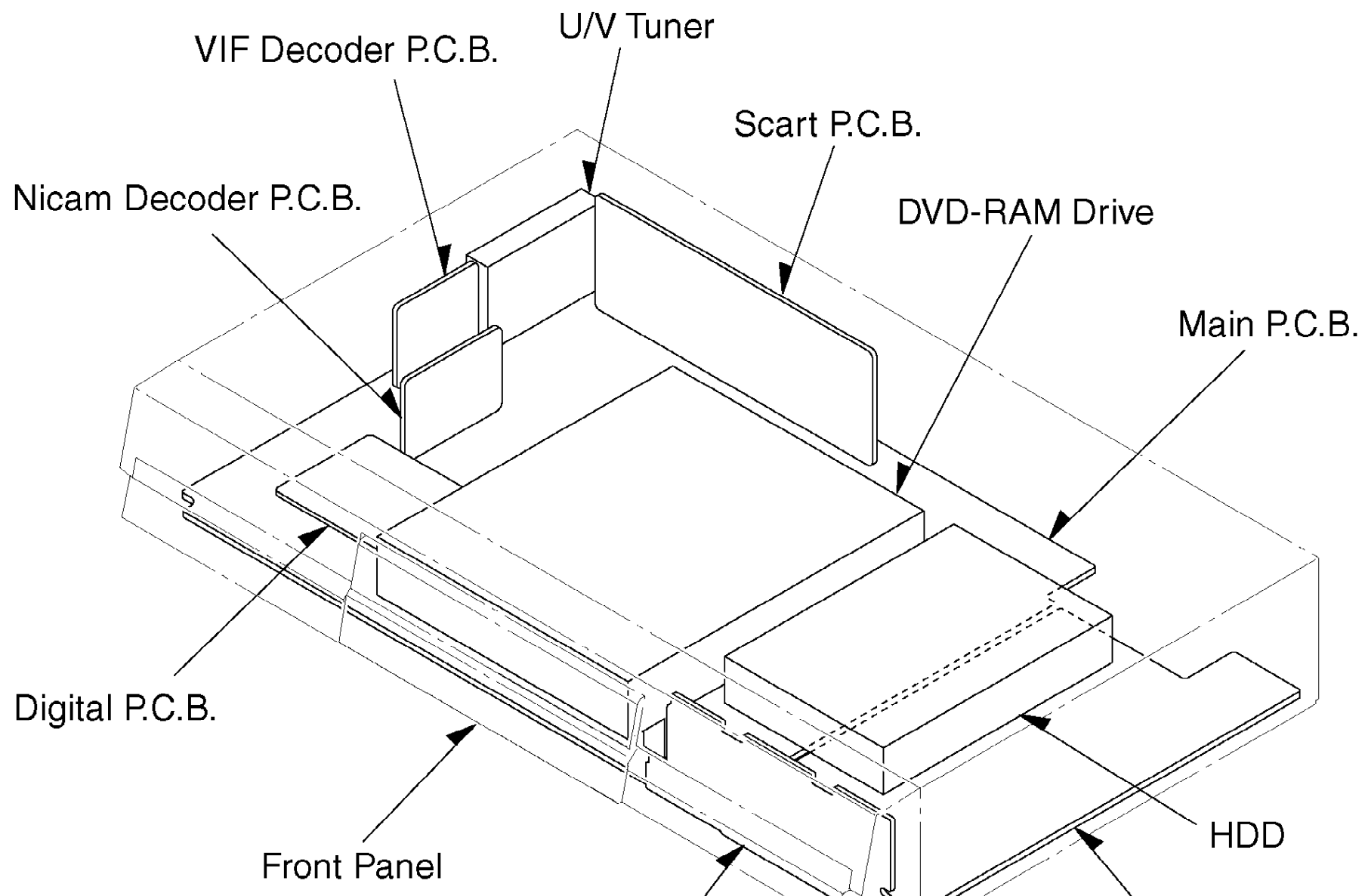
9.1. Disassembly Flow Chart

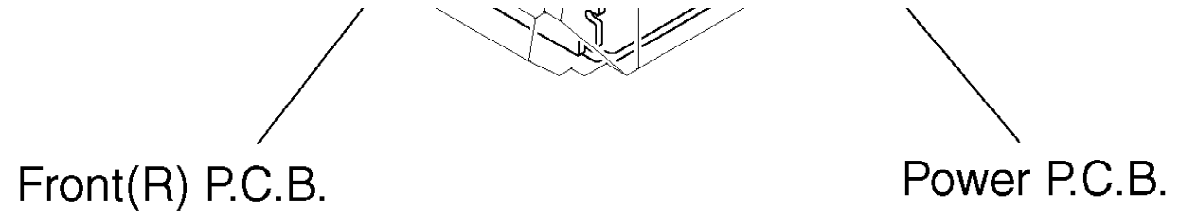
The following chart is the procedure for disassembling the casing and inside parts for internal inspection when carrying out the servicing.

To assemble the unit, reverse the steps shown in the chart below.



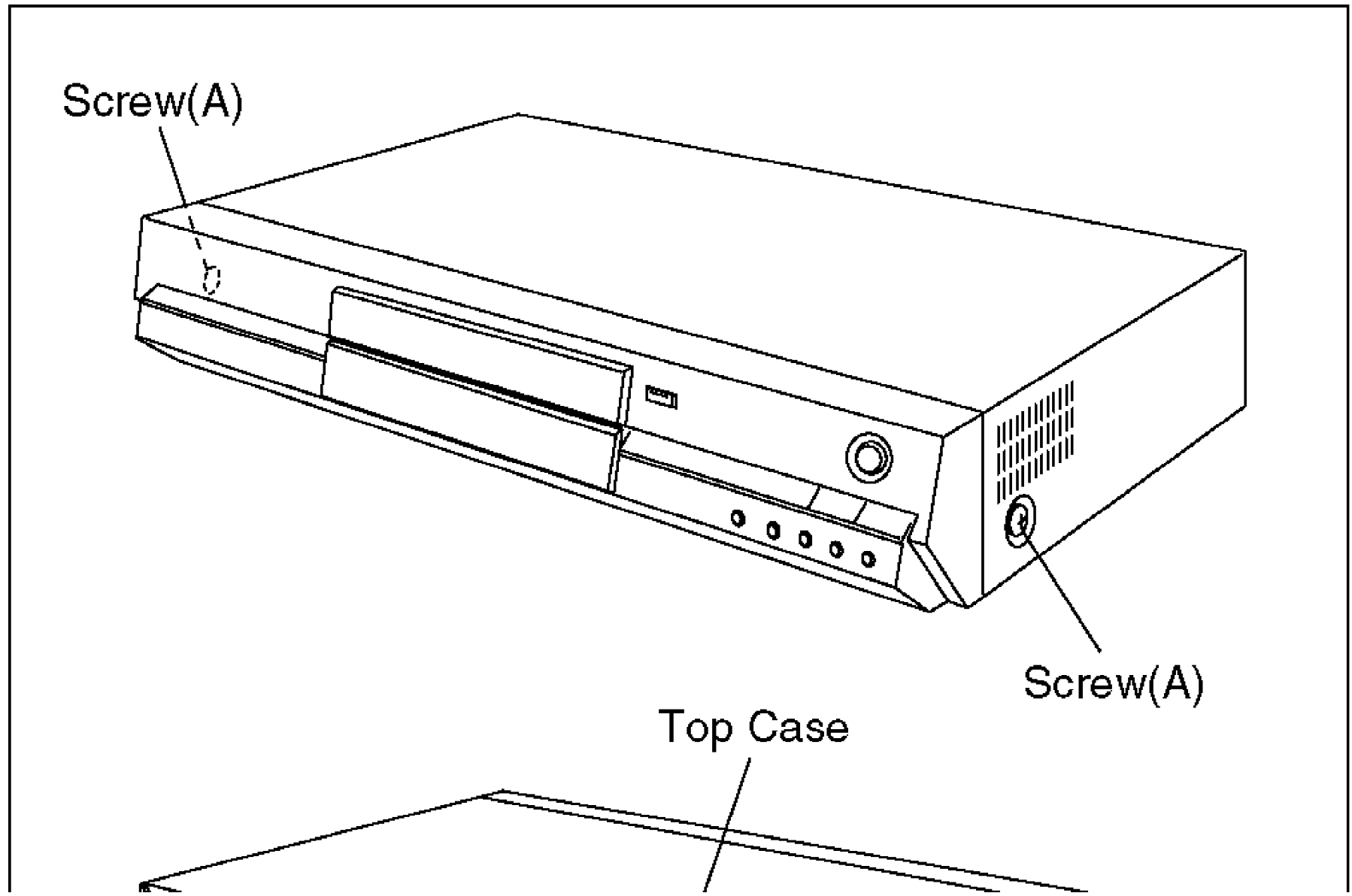
9.2. P.C.B. Positions

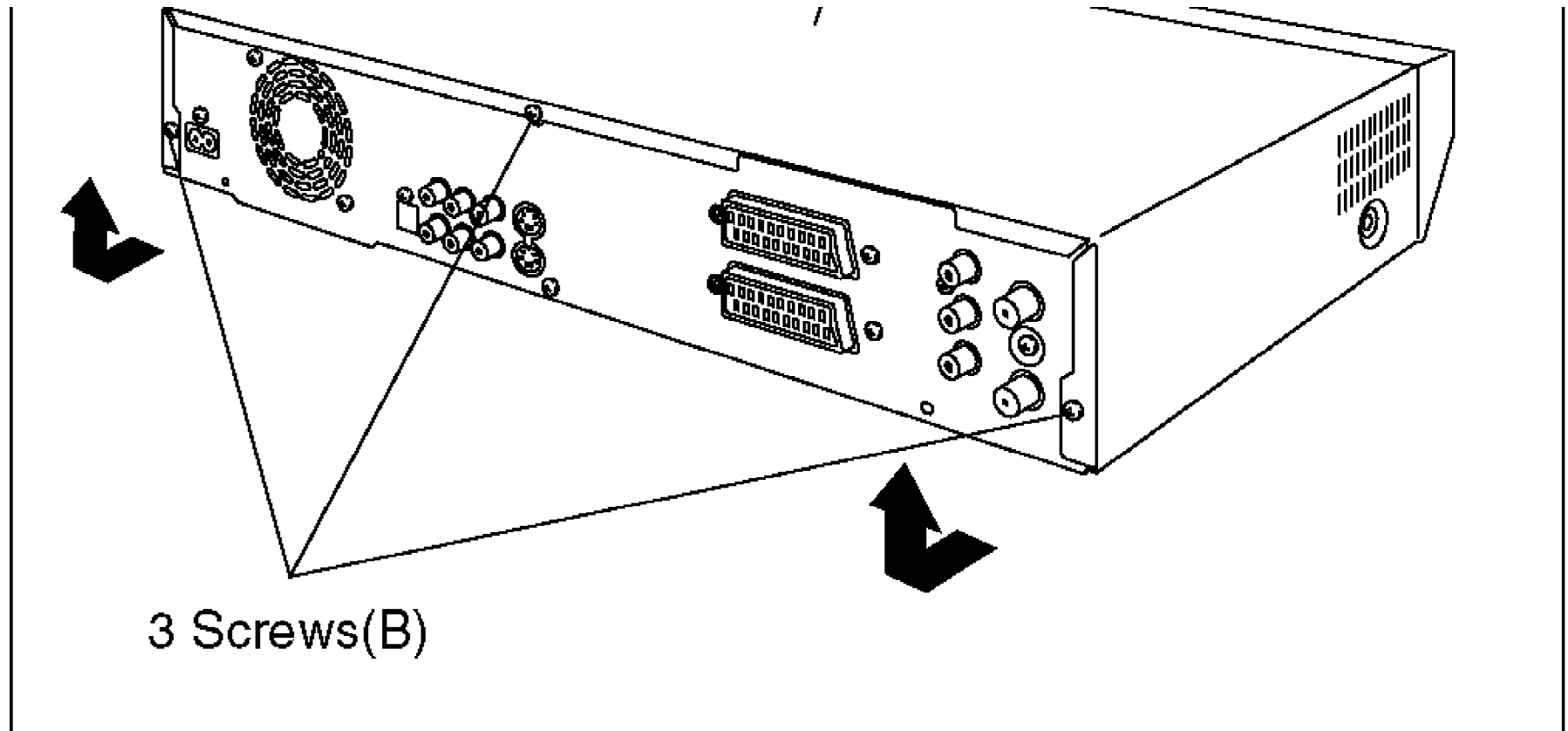




9.3. Top Case

1. Remove the 2 screws (A) and 3 screws (B).
2. Open the both ends at rear side of the Top Case a little and lift the Top Case in the direction of the arrows.





9.4. Digital P.C.B.

When replacing with Digital P.C.B., "UNFORMAT" indication is displayed and HDD must be formatted.

After that, **programme in the HDD will be lost.**

- How to format the HDD -

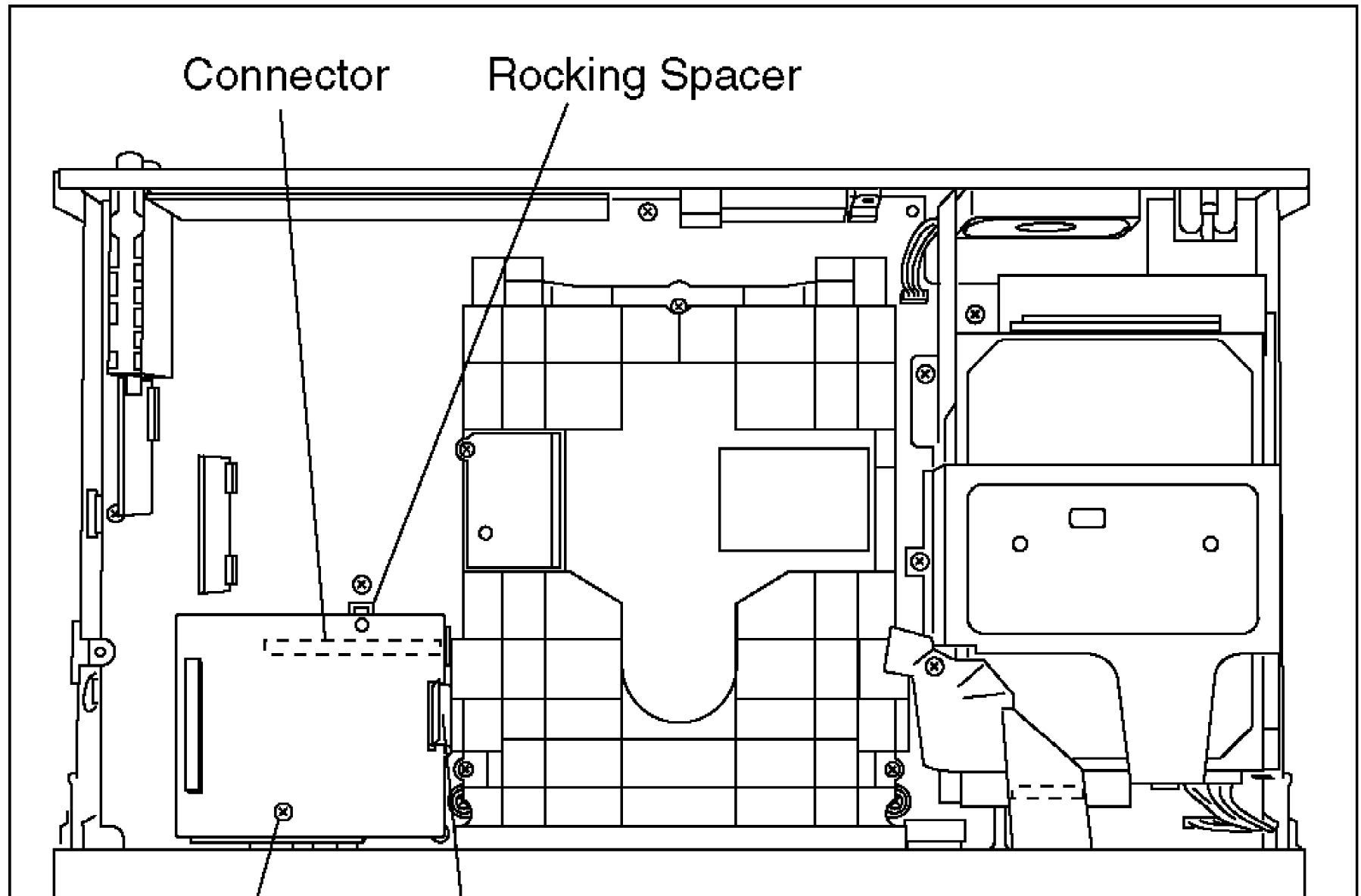
1) After "UNFORMAT" is displayed on the FL display, warning message for HDD format is appeared on the TV screen.

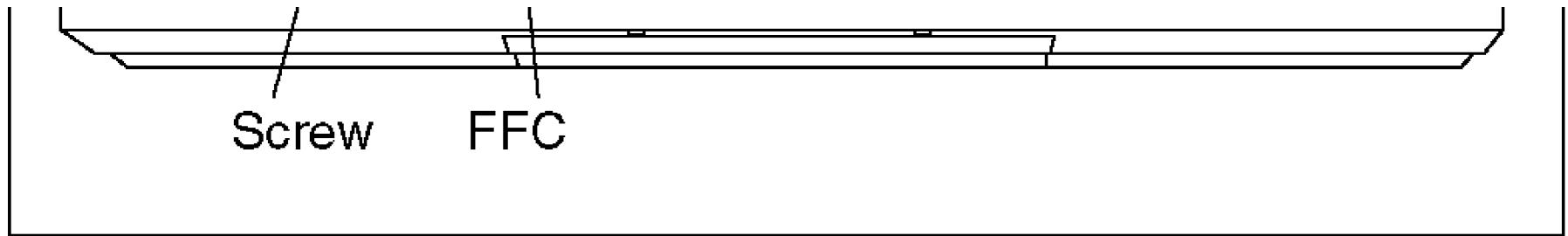
2) Select "YES" and press "ENTER" button on the remote controller, HDD will be formatted automatically.

1. Remove the FFC and a Screw.

2. Unlock a Rocking Spacer.

3. Lift up Digital P.C.B. slightly so to disconnect Connector to remove Digital P.C.B.





CAUTION:

When replacing Digital P.C.B., pay attention as below.

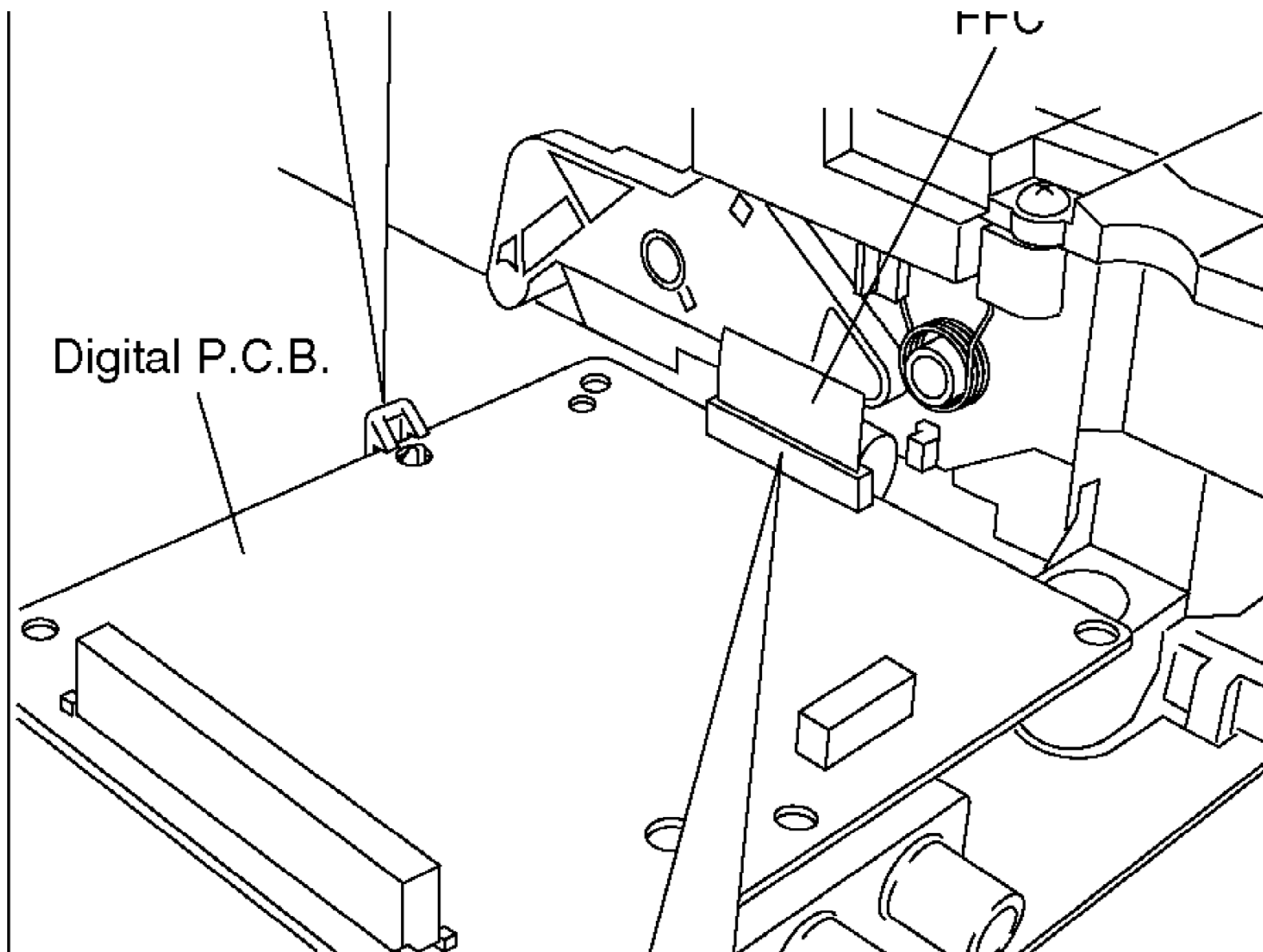
Rocking Spacer

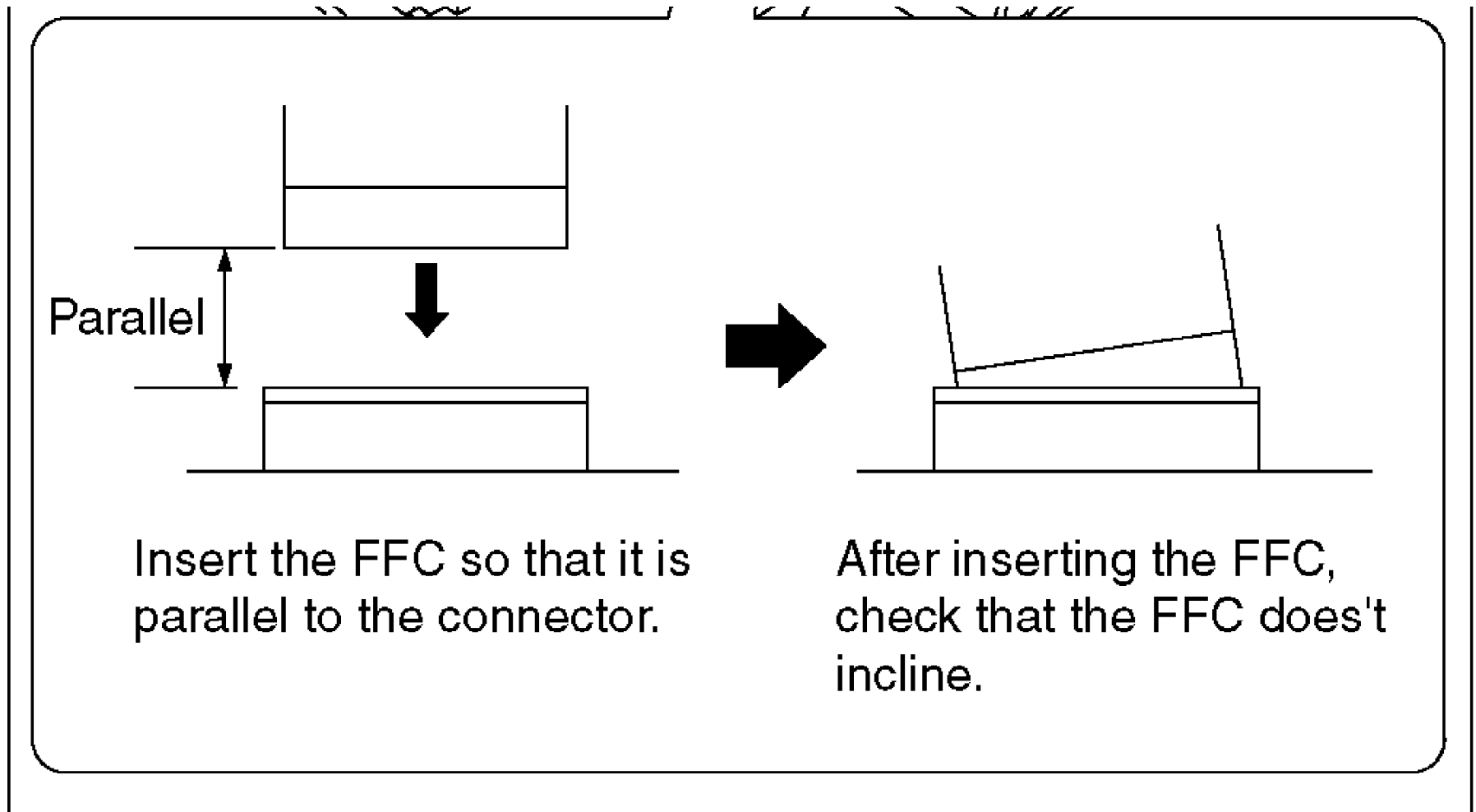
Digital P.C.B.

Main P.C.B.

After inserting the Digital P.C.B.,
check that the Rocking Spacer
has rocked certainly.

FEC

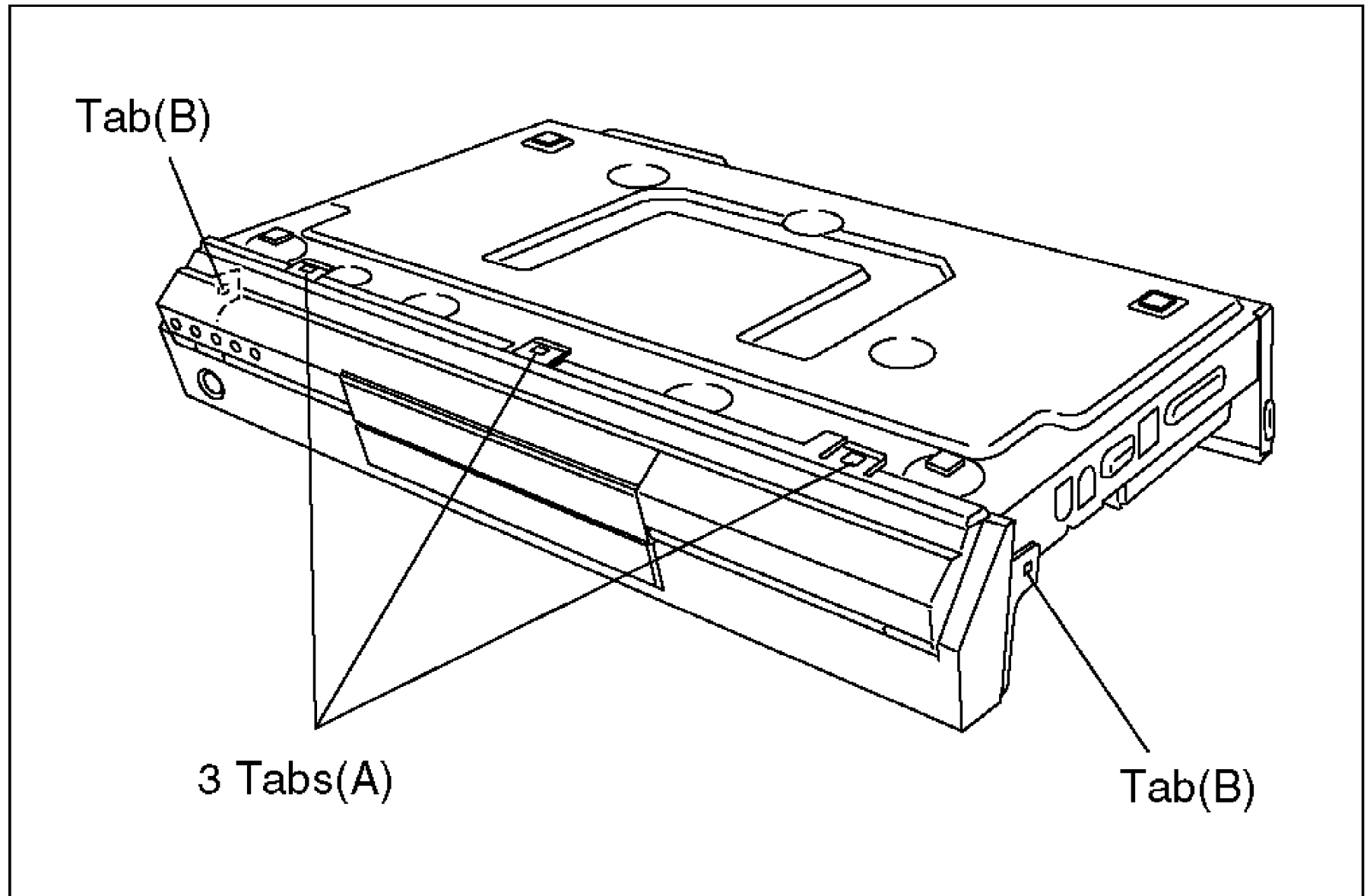




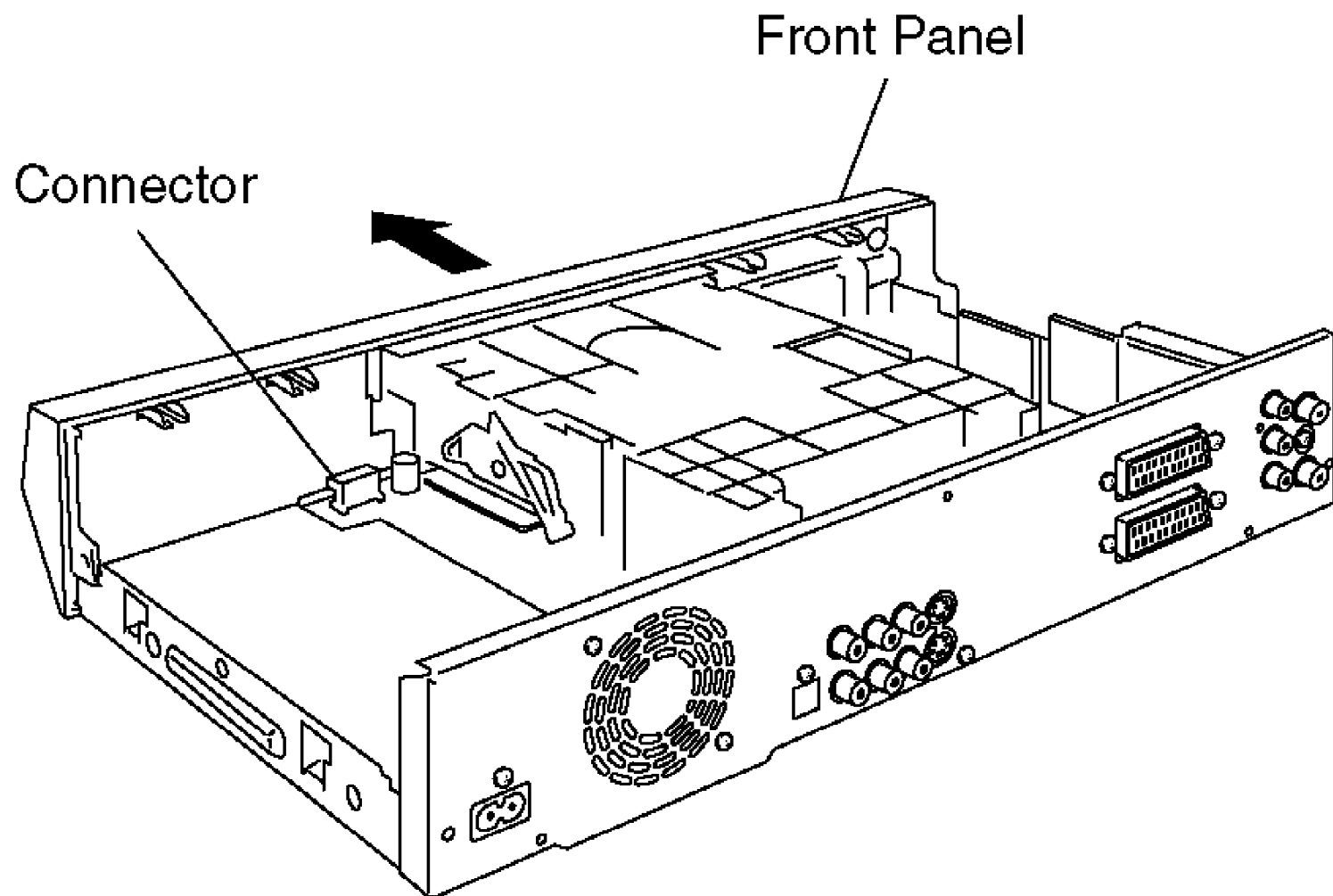
9.5. Front Panel

1. Remove 3 tabs (A) and 2 tabs (B) in this order. (The tab (A) and (B) should be removed at the same time,

respectively.)

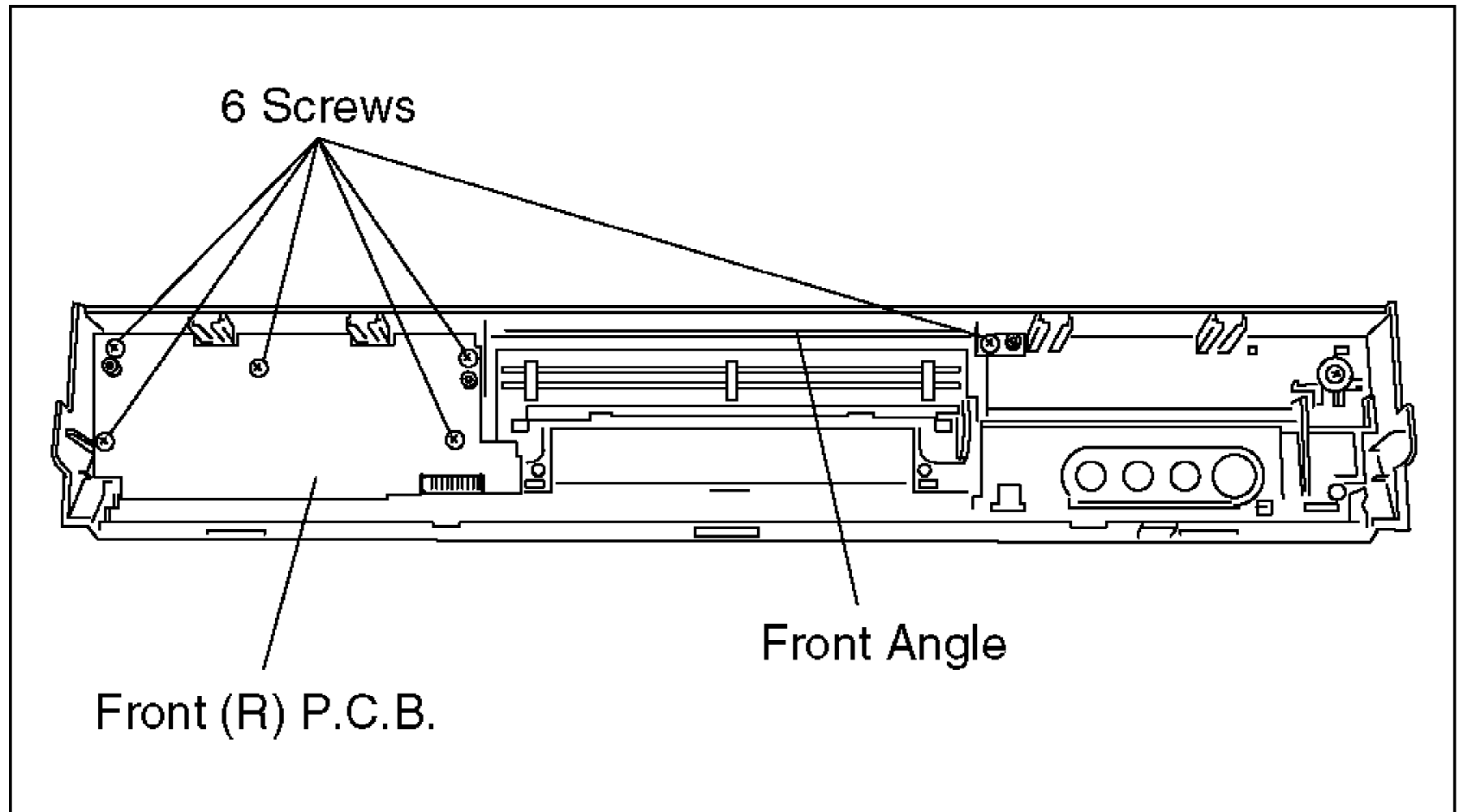


2. Move the front panel to front side straight and slowly so to remove it with Connector.



9.6. Front (R) P.C.B.

- 1. Remove 6 screws and Front Angle.**



9.7. HDD

When replacing with HDD, "UNFORMAT" indication is displayed and HDD must be formatted.

After that, **programme in the HDD will be lost.**

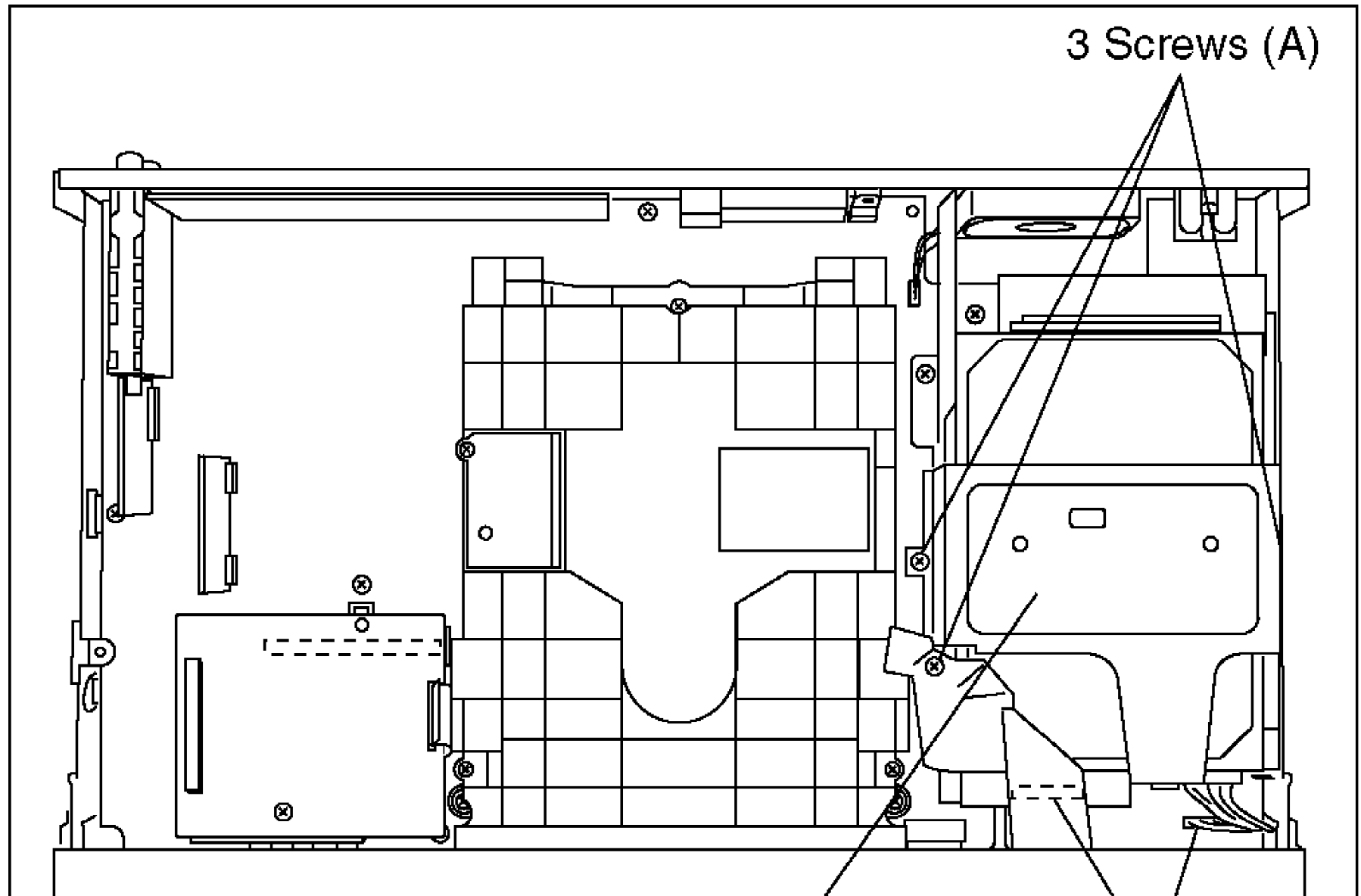
- How to format the HDD -

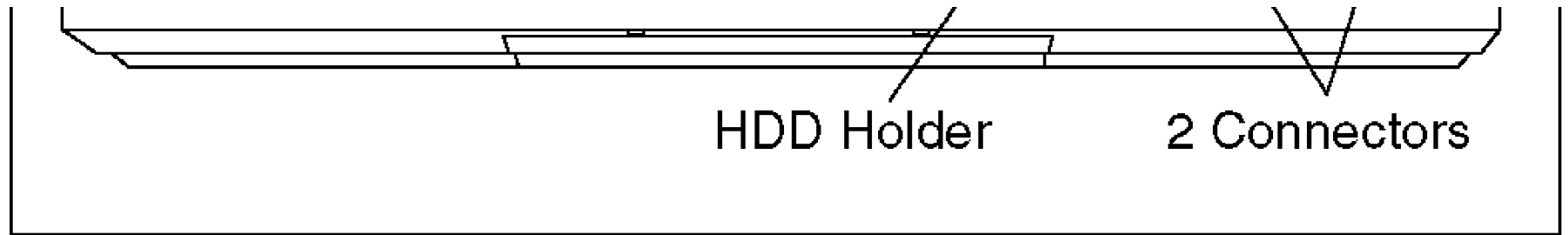
1) After "UNFORMAT" is displayed on the FL display, warning message for HDD format is appeared on the TV screen.

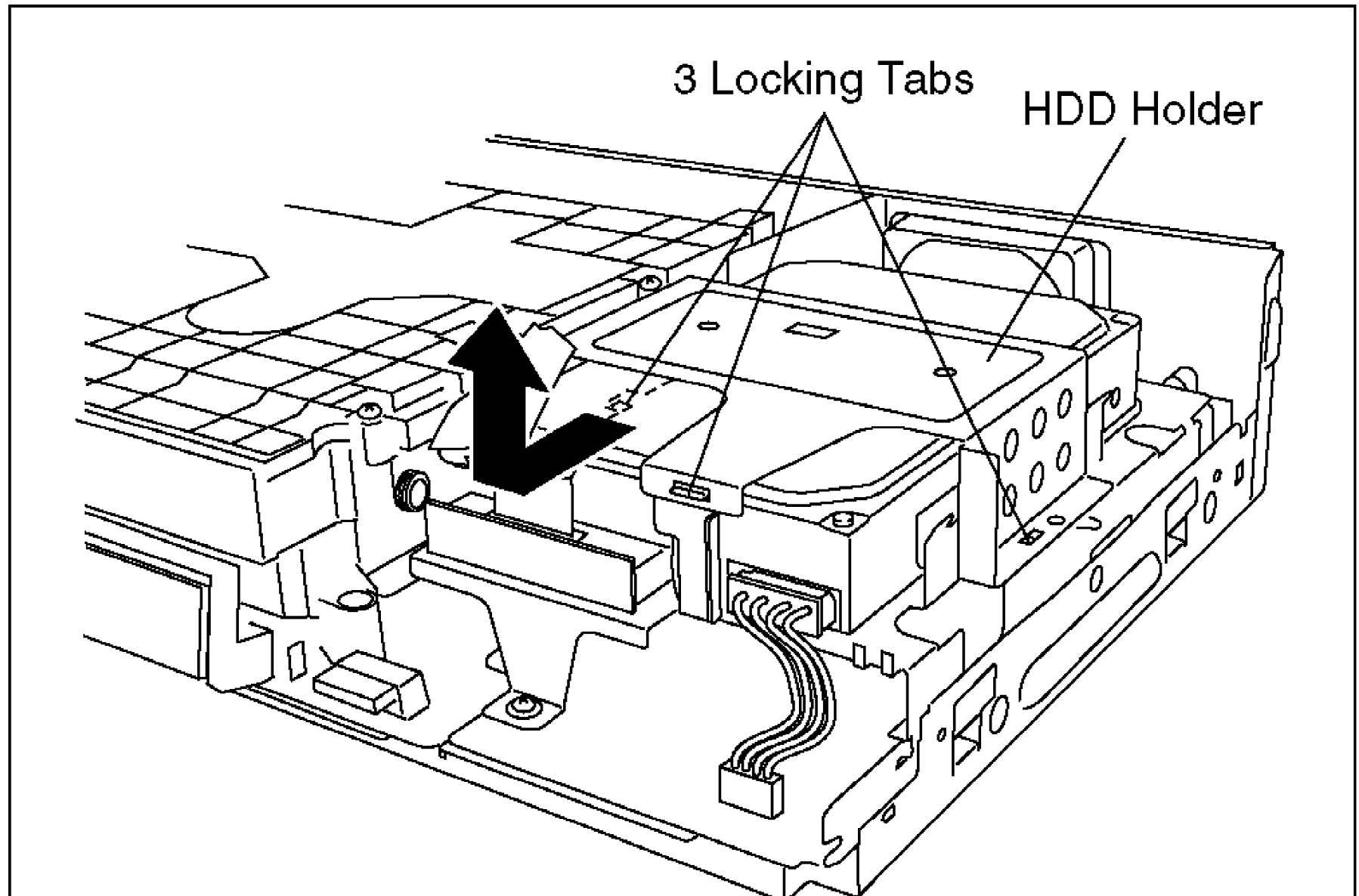
2) Select "YES" and press "ENTER" button on the remote controller, HDD will be formatted automatically.

1. Remove 3 Screws (A) and 2 connectors.

2. Slide and lift up HDD Holder in the direction of the arrows so to unlock 3 locking tabs.

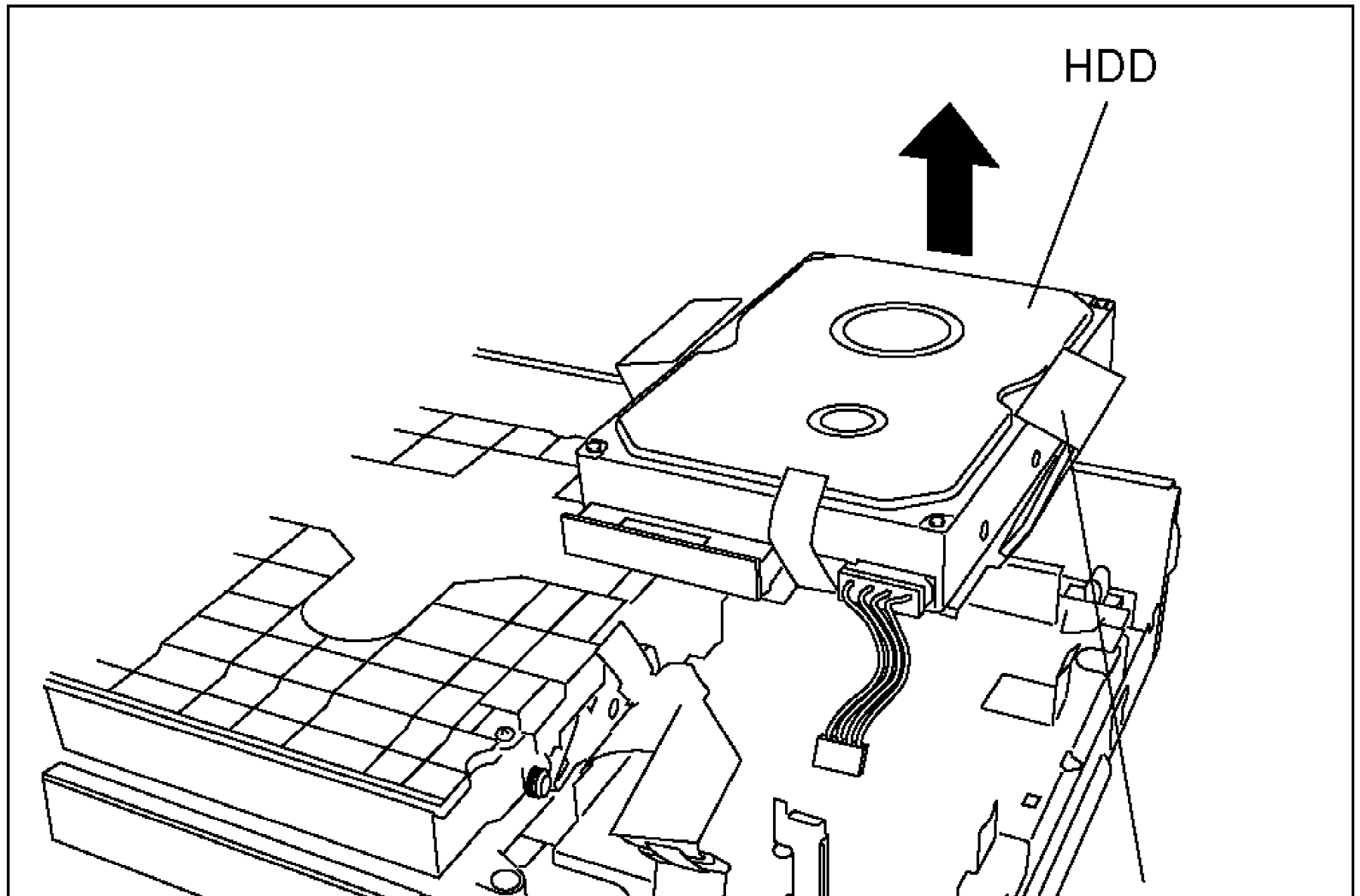


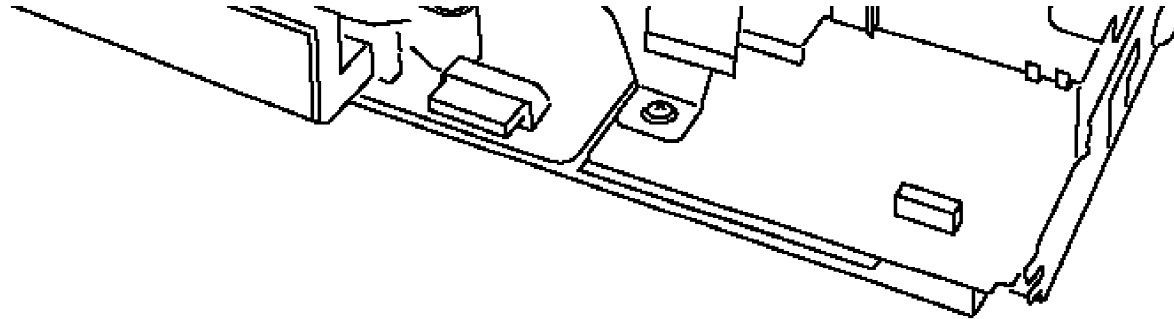






3. Lift up HDD with super sheet vertically and remove super sheet.





Super sheet

Handling of HDD

The following precautions should be taken when handling HDD.

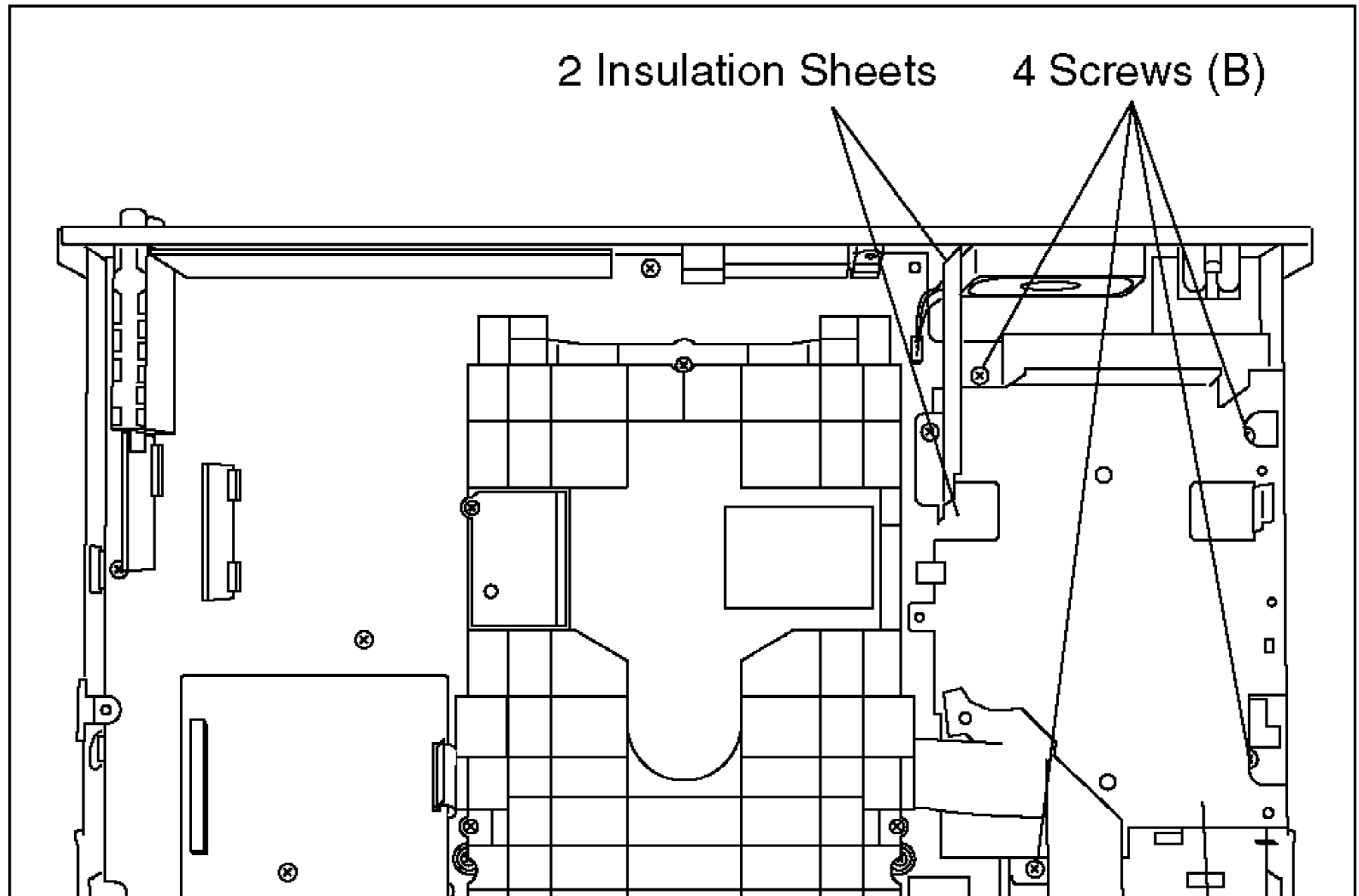
1. Never give an impact to HDD. (Even a drop from 1cm height can be a cause of HDD failure.
2. When placing HDD on a workbench, provide a mat on a bench for shock absorption and anti-static purposes.
3. When installing HDD, release it from your hands only after confirming that it is fully set on the chassis.
4. Avoid stacking up HDD.
5. HDD is unstable and easy to fall. Do not stand it on its side face.
6. When handling HDD, hold its side faces to avoid static hazard.
7. Do not place HDD on its wrapping bag after removal. (Prevention of static hazard
8. Use a screwdriver with low impact and anti-static features.
9. To replace HDD, remove the vertical short-circuit pin.
(Keep the horizontal short-circuit pin in its place)

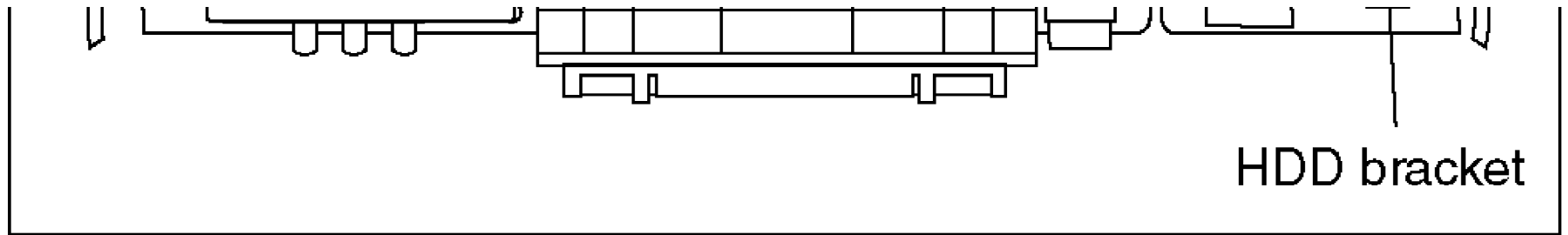
Note:

When replacing HDD, please make the rear jumper slave or cable select configuration. (same configuration as HDD to exchange)

9.8. HDD Bracket

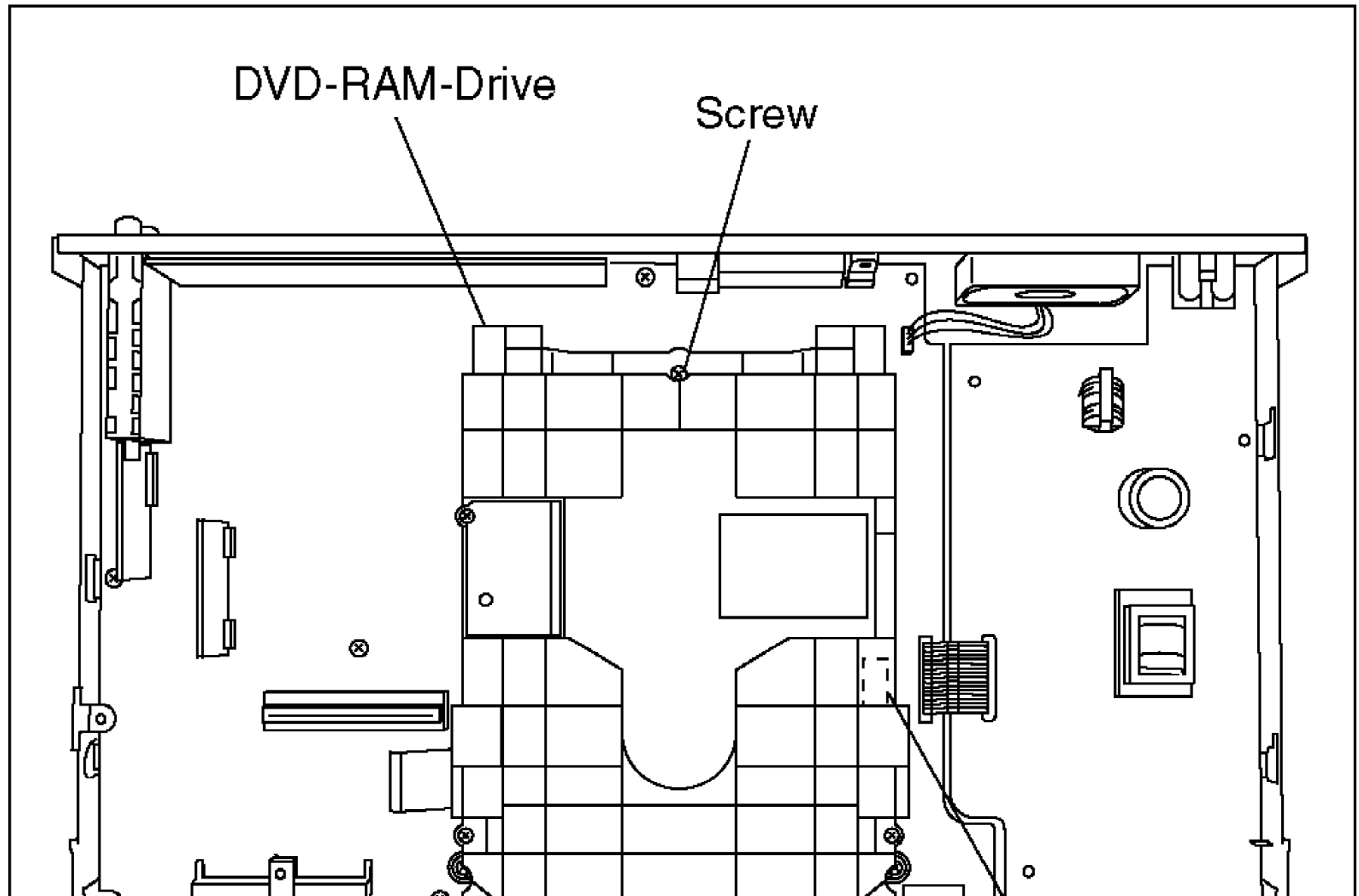
- 1. Remove 4 screws (B) and HDD Bracket with 2 Insulation Sheets.**

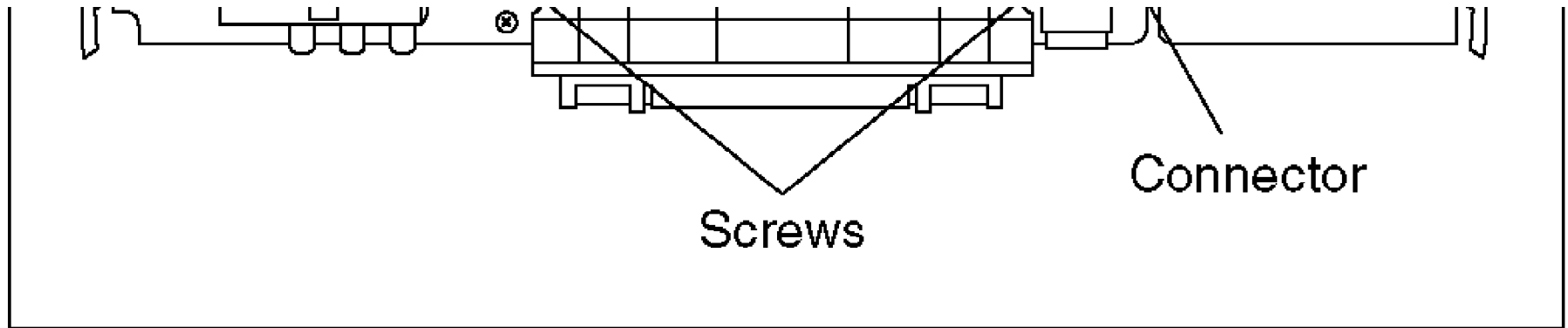




9.9. DVD-RAM Drive

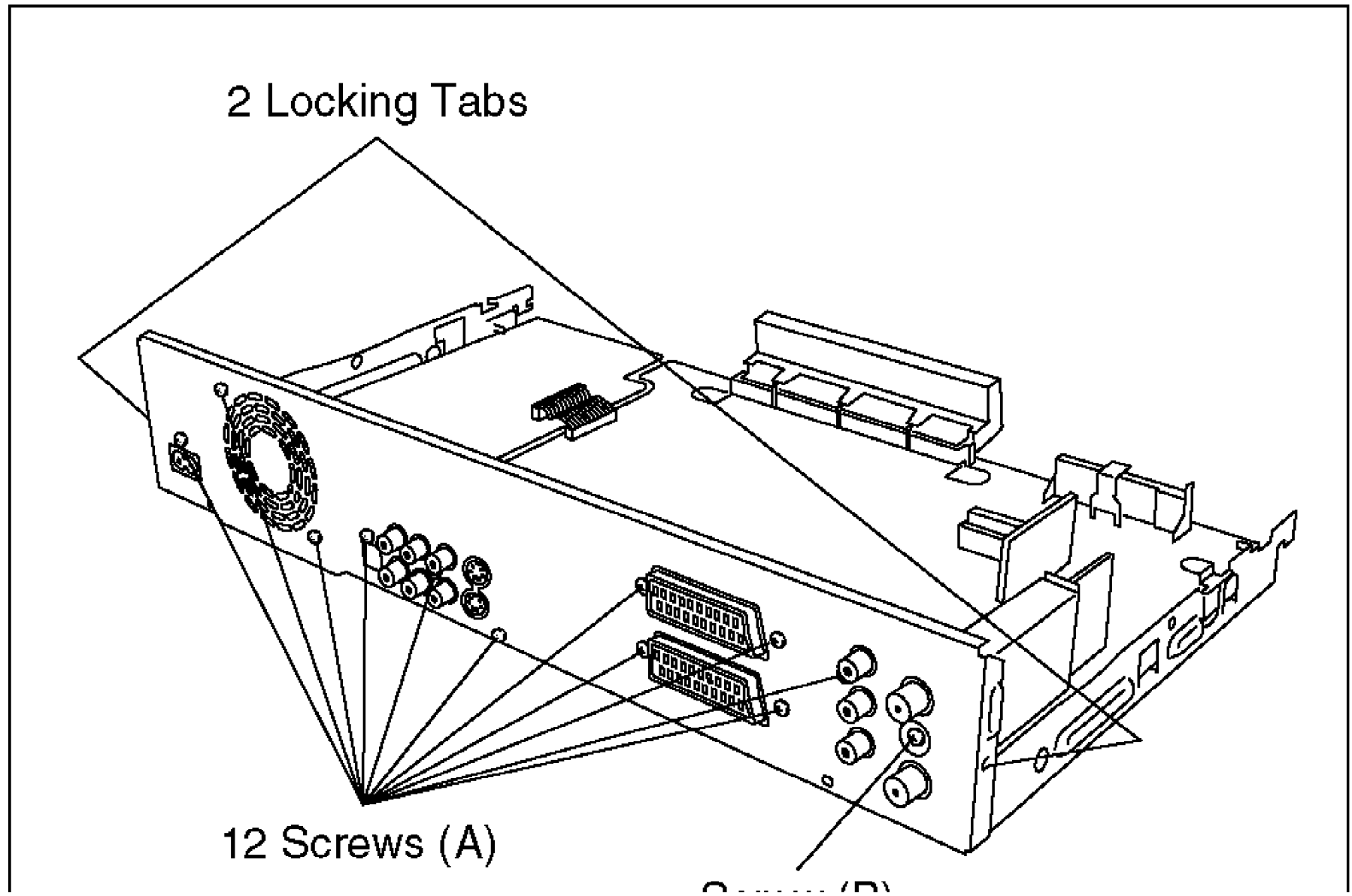
1. Remove 3 Screws.
2. Pull out DVD-RAM Drive vertically so to remove it with Connector.





9.10. Rear Panel

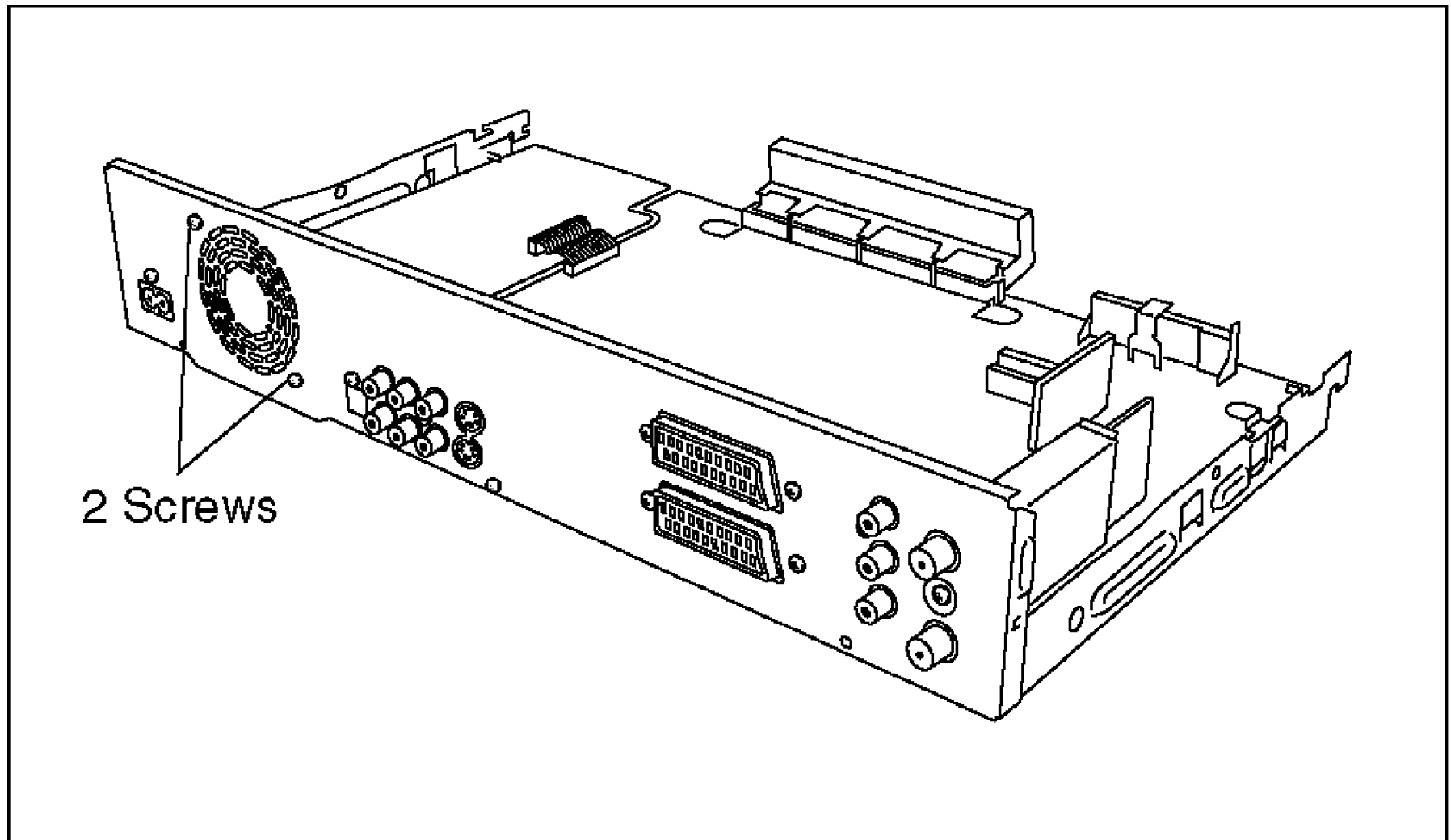
1. Remove the 12 screws (A) and screw (B).
2. Unlock 2 Locking Tabs to remove Rear Panel.



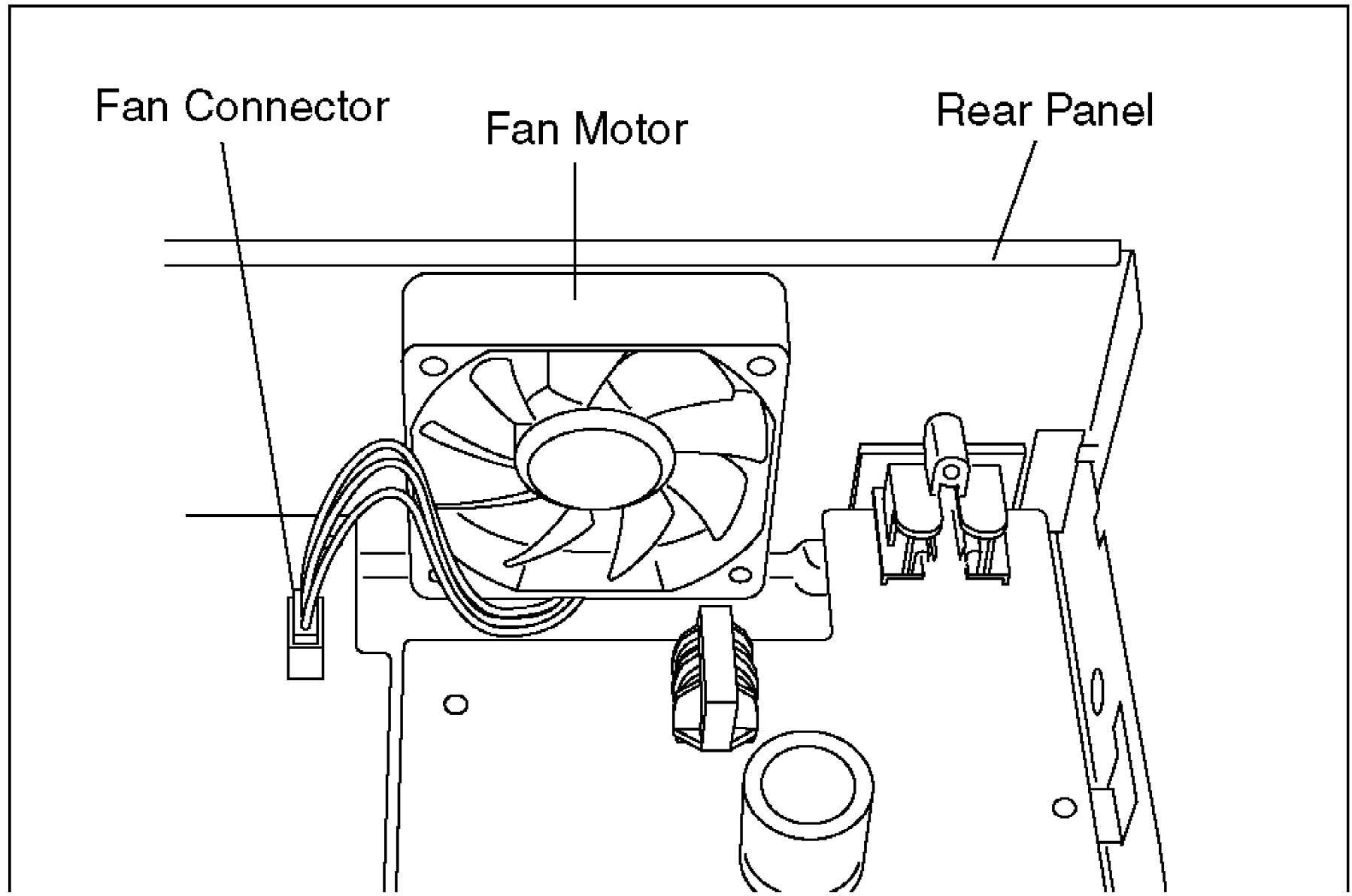
Screw (B)

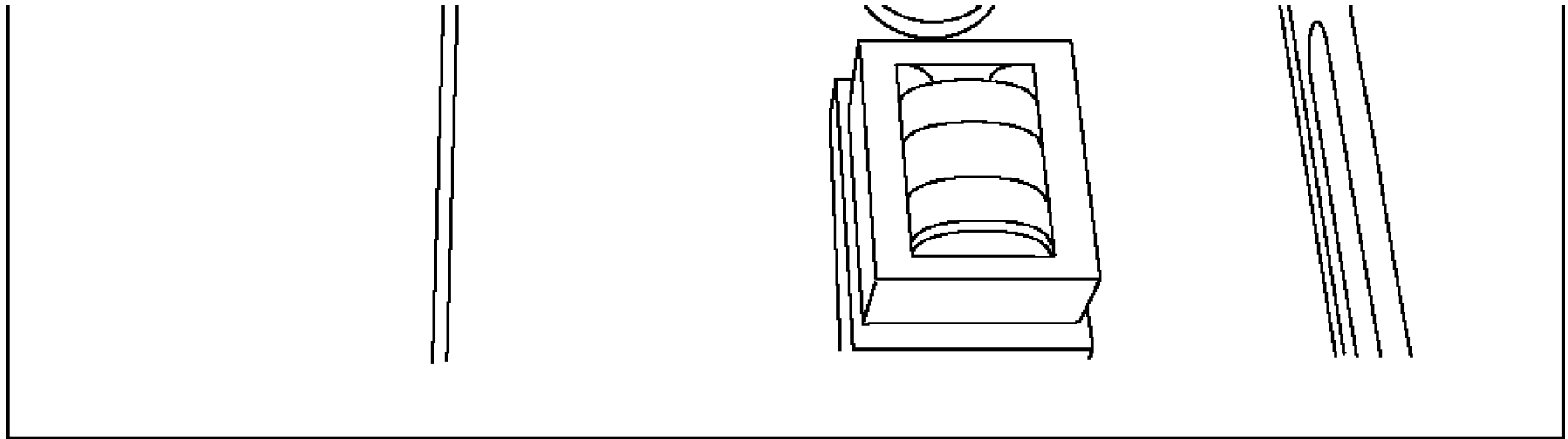
9.10.1. Only Fan Motor

1. Remove the 2 screws.



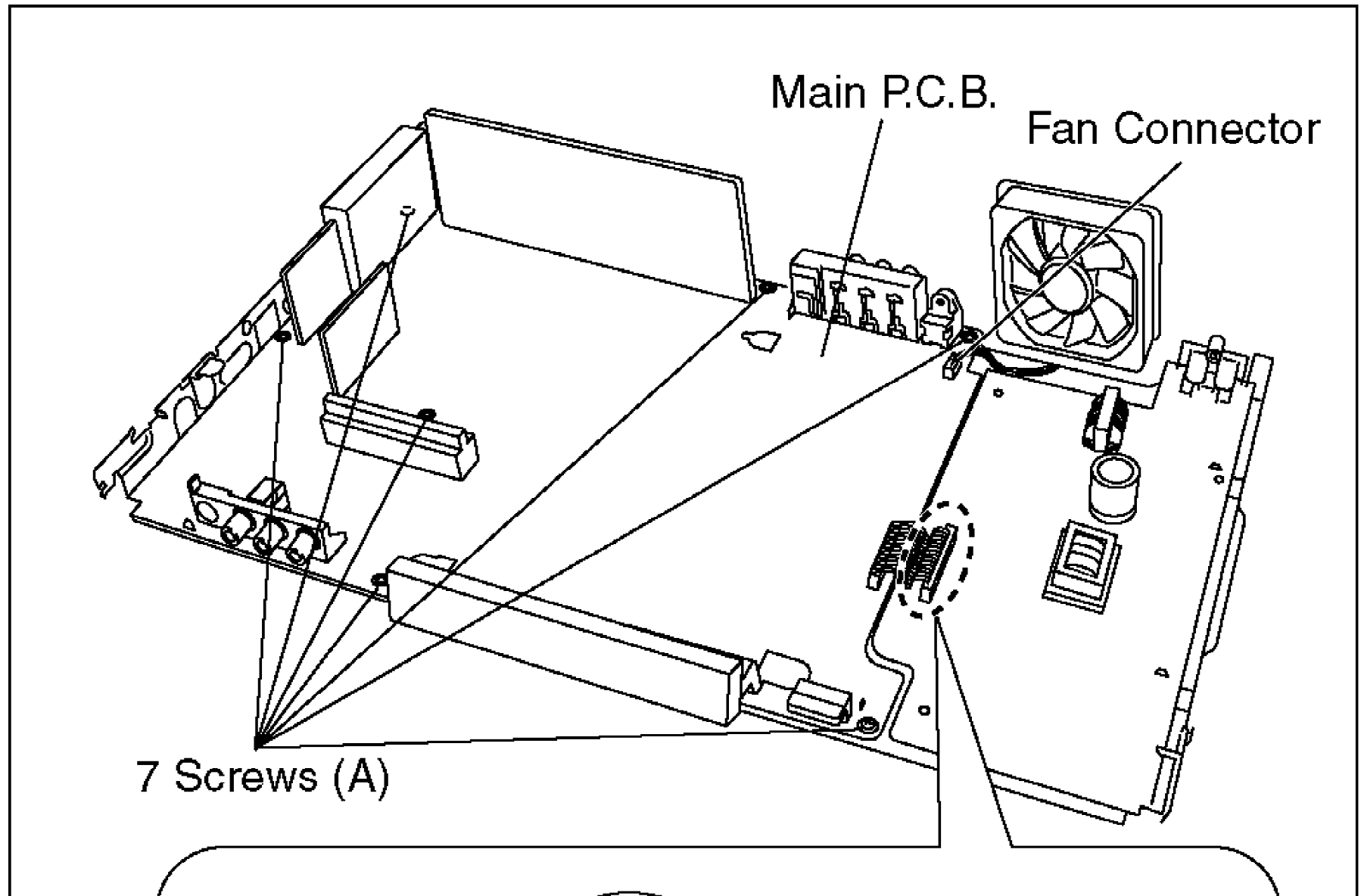
2. Remove Fan Connector to remove Fan Motor.

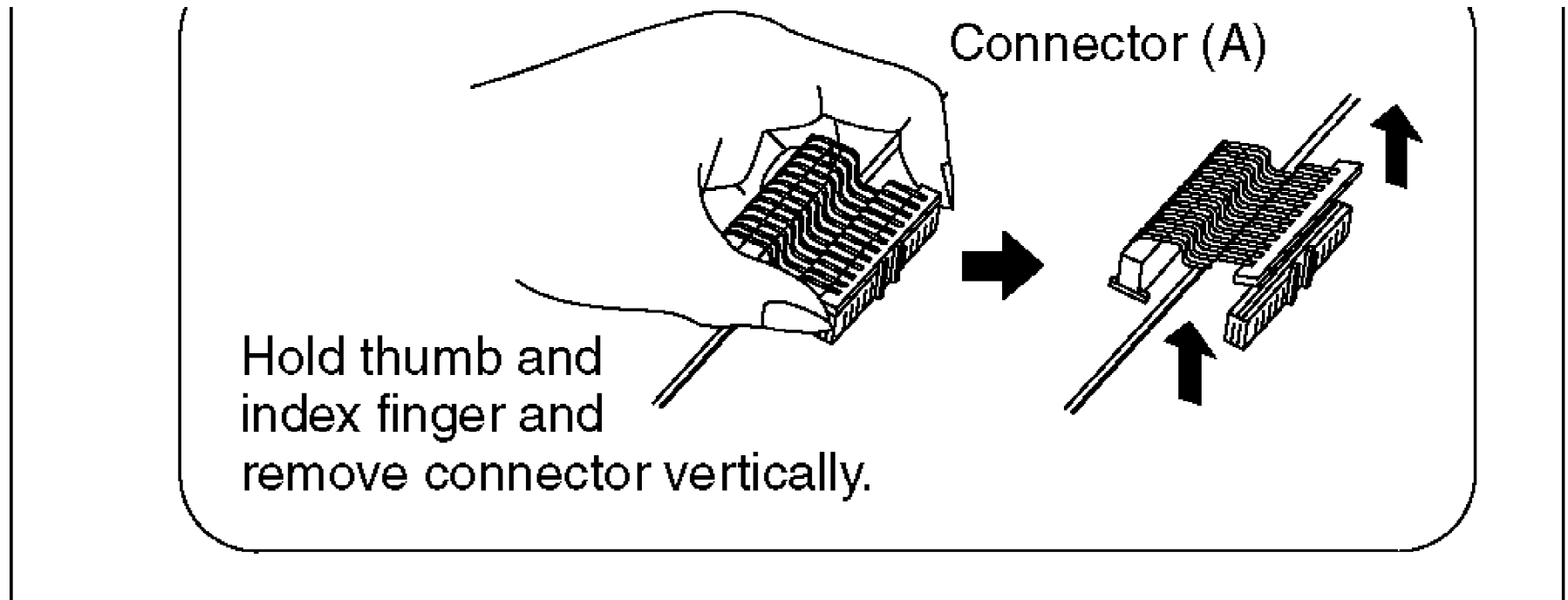




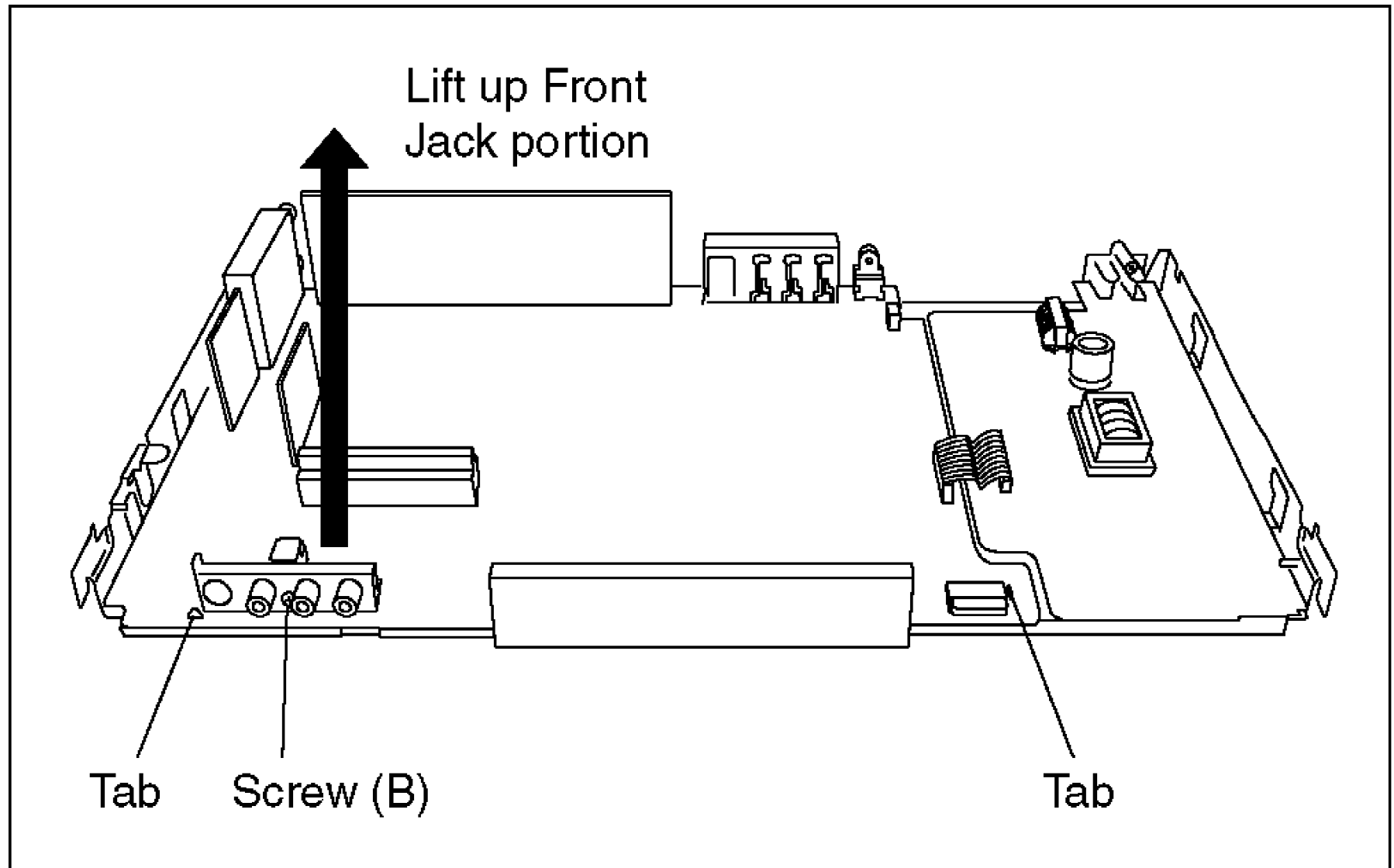
9.11. Main P.C.B.

1. Remove the 7 screws (A), Connector (A) and Fan Connector.



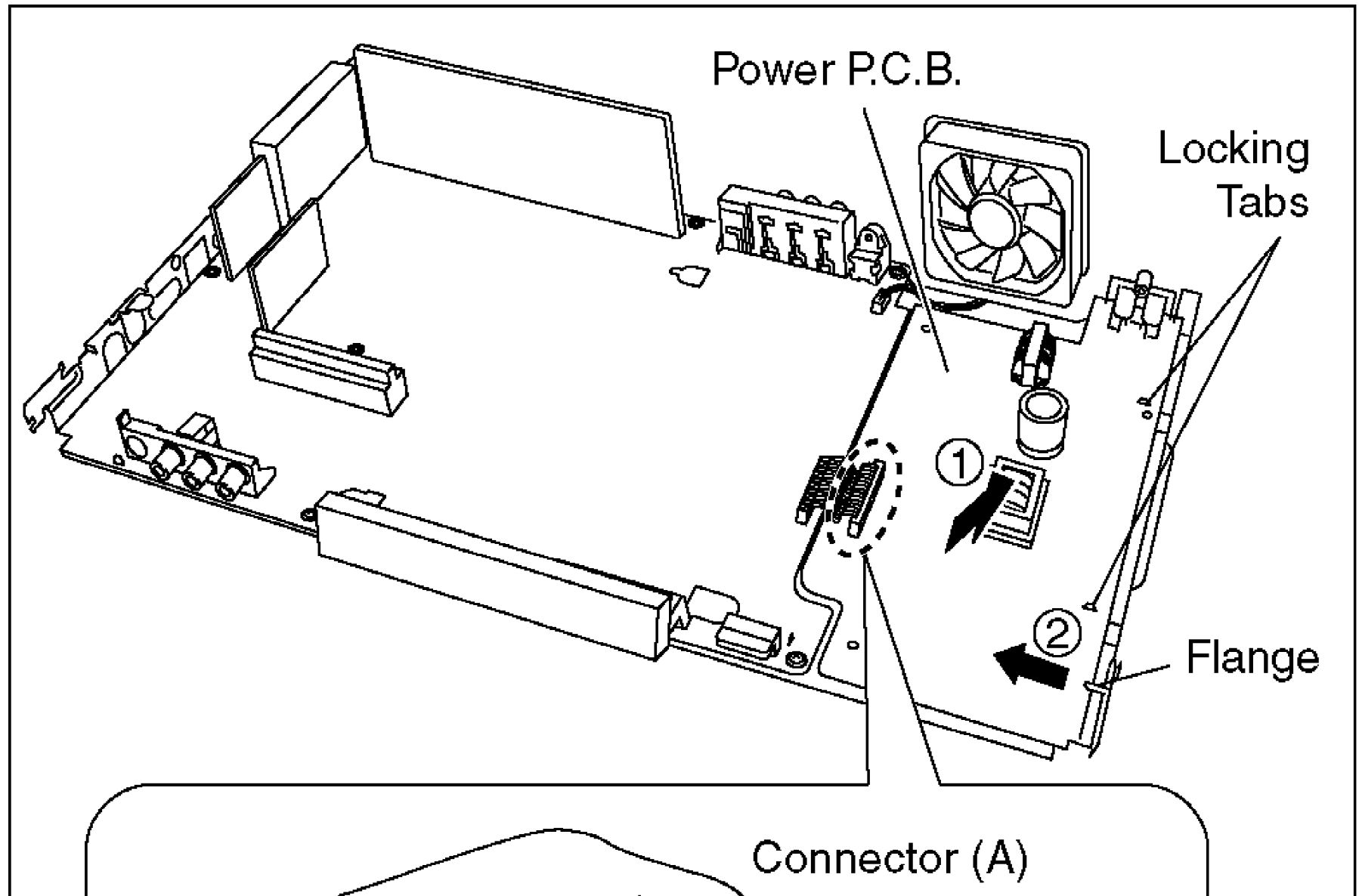


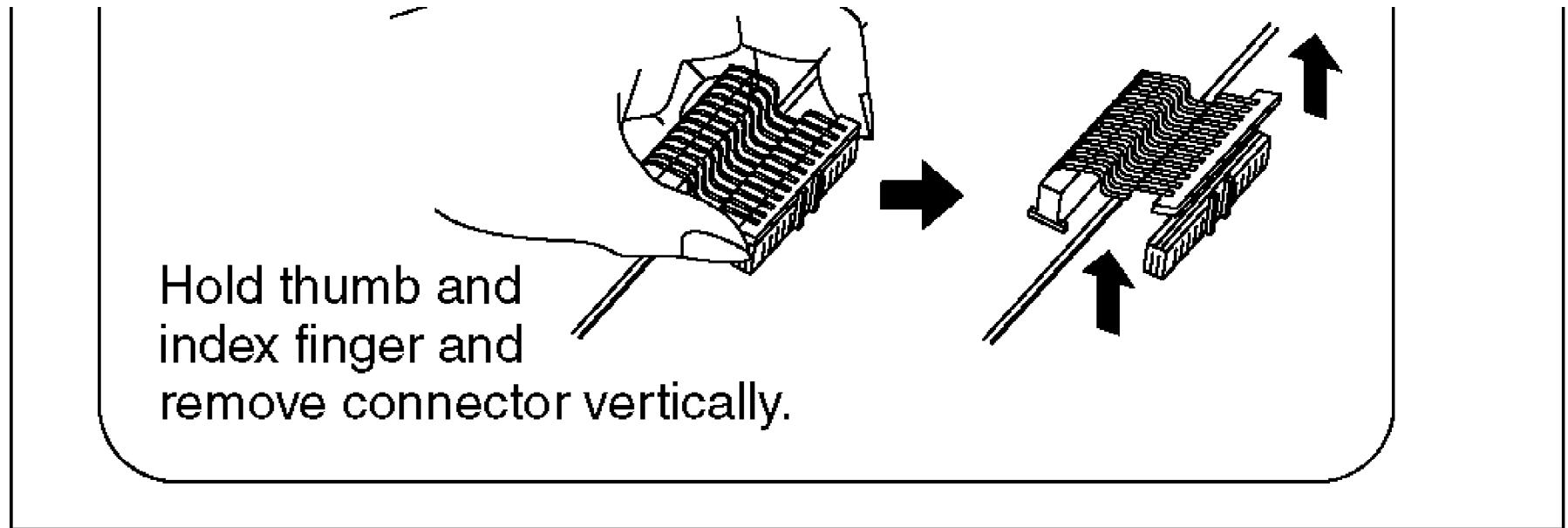
2. Remove a Screw (B) and lift up Front Jack portion of Main P.C.B. slightly so to unlock Tab to remove Main P.C.B..



9.12. Power P.C.B.

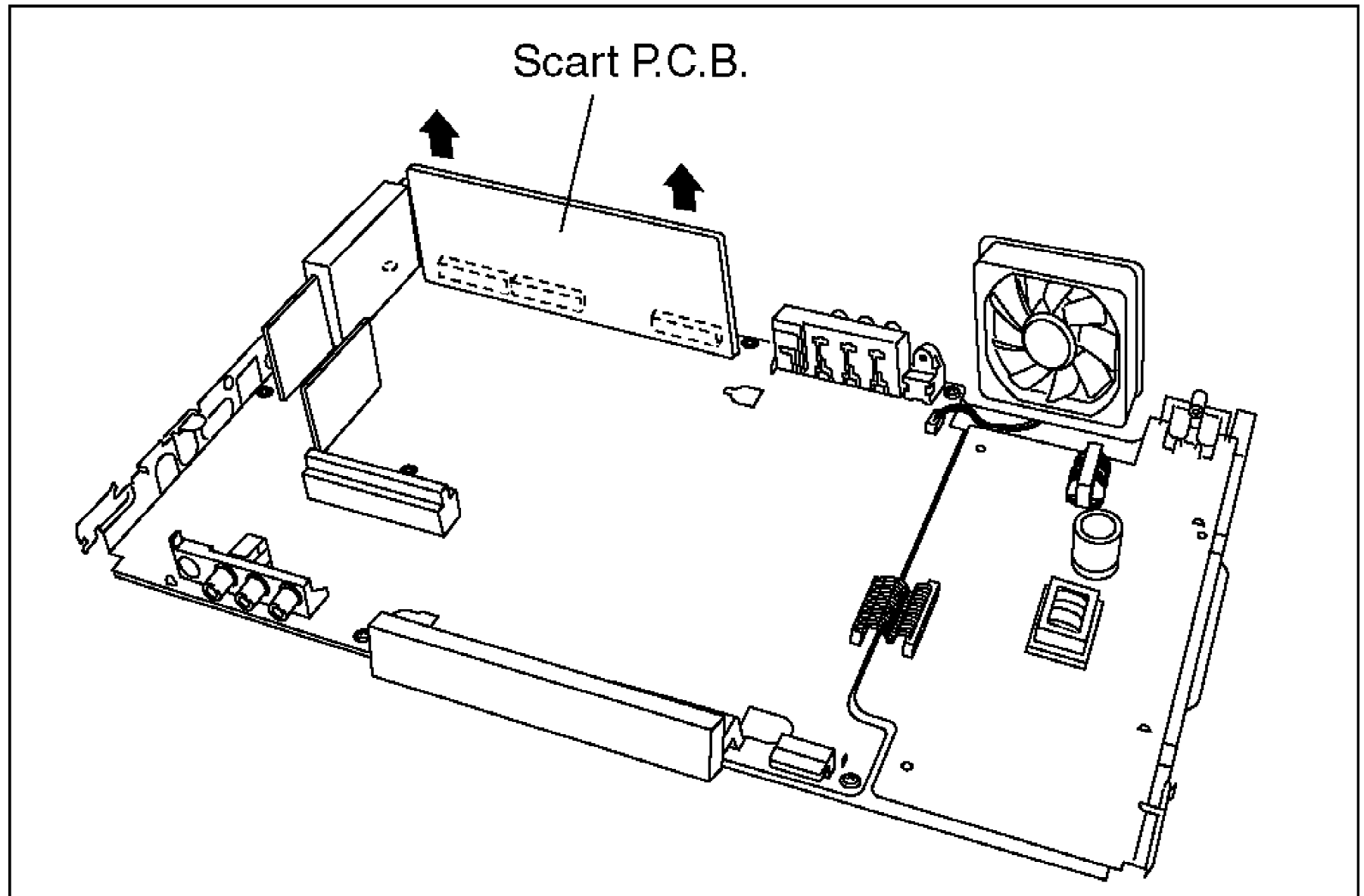
1. Lift up Power P.C.B. a little so to unlock 2 Tabs and slide Power P.C.B. so to unlock Flange to remove Power P.C.B.





9.13. The Scart P.C.B.

1. Pull out the Scart P.C.B. in the direction of the arrow.



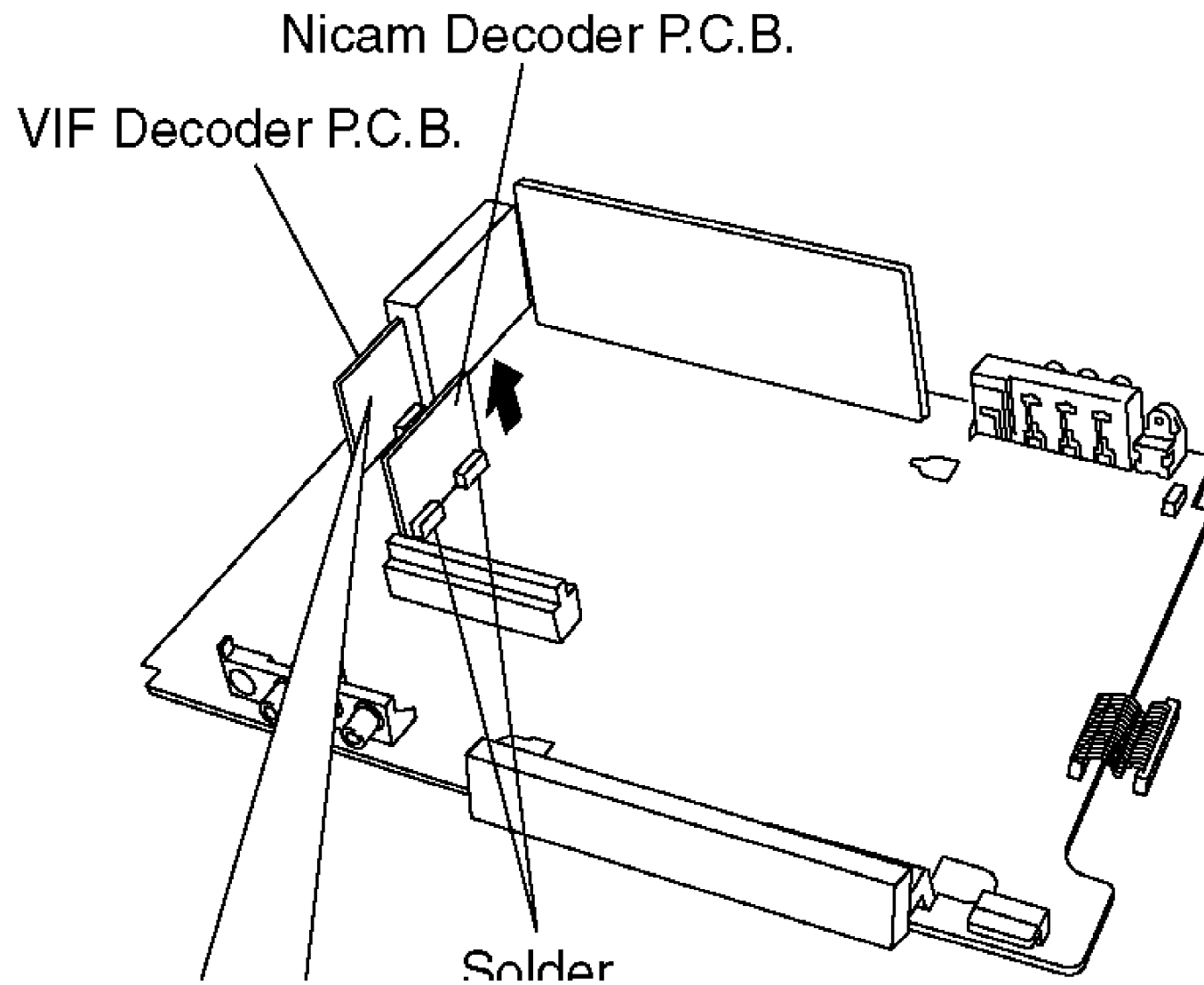
Note:

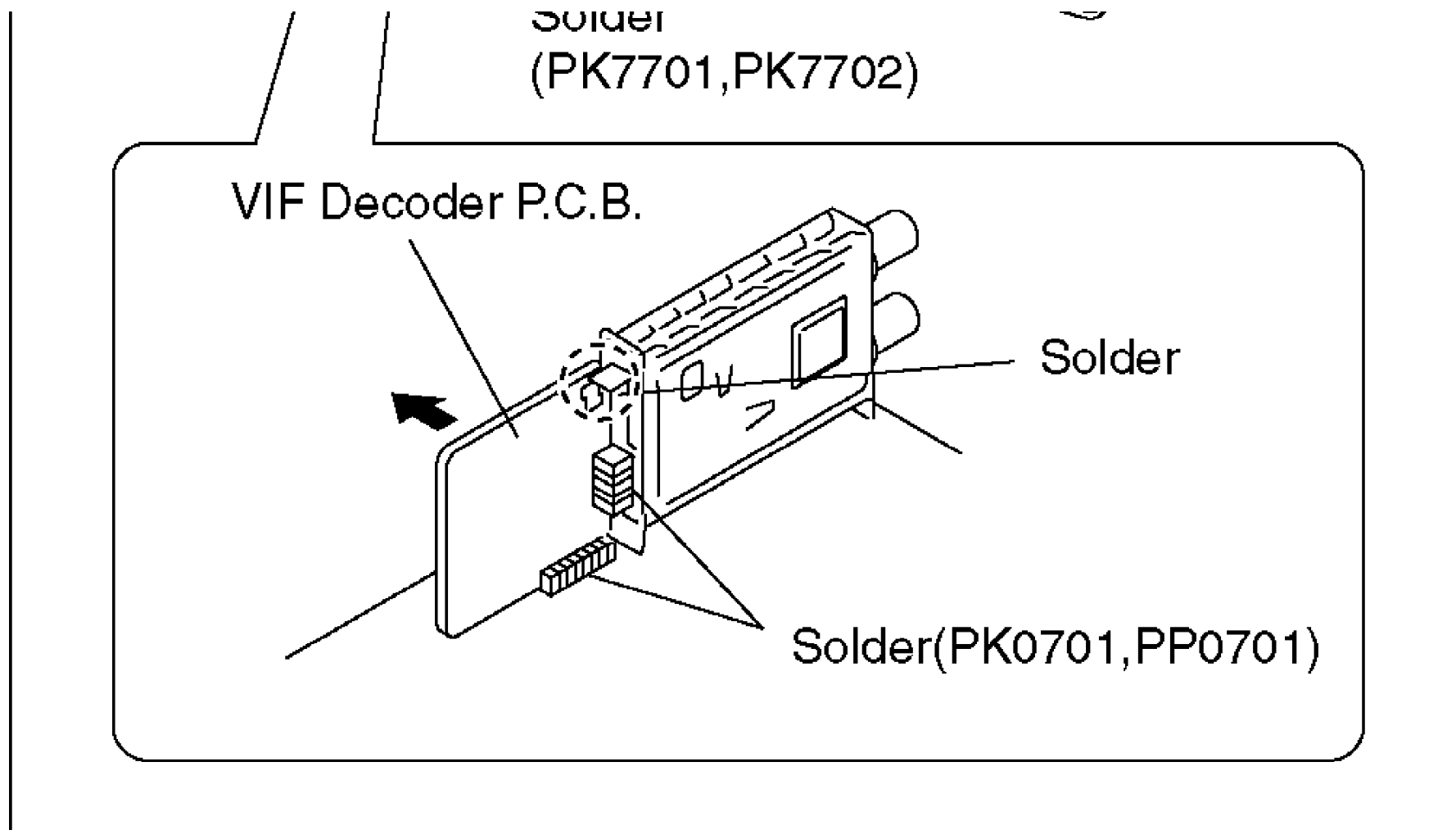
At first disconnect the connector on one side, and pull out the Scart P.C.B.



9.14. VIF Decoder P.C.B. and Nicam Decoder P.C.B.

1. Remove the solders.
2. Pull out the VIF Decoder P.C.B. and Nicam Decoder P.C.B.





10. Service Fixture and Tools

Part Number	Description	Compatibility
RFKZ0125	Extension FFC (Digital P.C.B. - DVD-RAM Drive / 40 Pin)	Same as E50 series
RFKZ0168	Extension Cable (Main P.C.B. - Fan / 3 Pin)	Same as E50 series
RFKZ0169	Extension Cable (Power P.C.B. - HDD / 4 Pin)	Same as E100H series
RFKZ0197	Extension Cable (Main P.C.B. - DVD-RAM Drive / 8 Pin)	New
RFKZ0214	Extension Cable (MainP.C.B. - Digital P.C.B. / 88 Pin)	New
RFKZ0215	Extension Cable (MainP.C.B. - Front (R) P.C.B. / 12 Pin)	New
RFKZ0216	Extension Cable (MainP.C.B. - Power P.C.B. / 23 Pin)	New

NOTE:

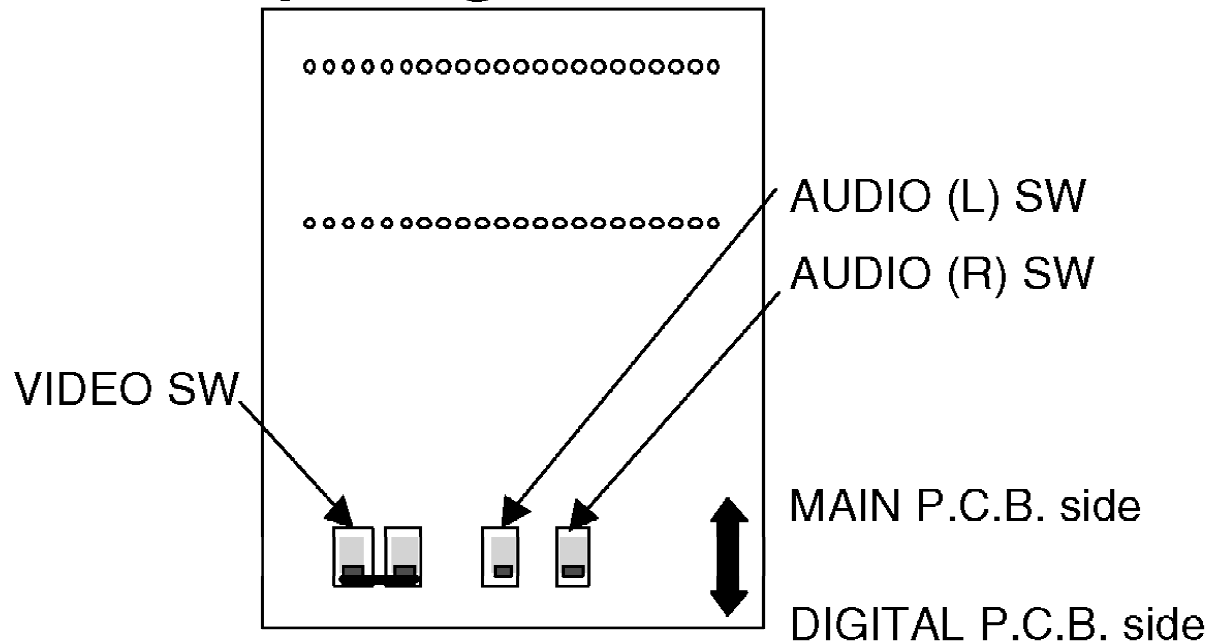
Extension Cable RFKZ0214 has A/V Output Signal switches.

Output signals can be switched from MAIN P.C.B. side or DIGITAL P.C.B. side.

When check MAIN P.C.B., turn switches to MAIN PCB side.

When check DIGITAL P.C.B., turn switches to DIGITAL P.C.B. side.

A/V Output signal Switches of RFKZ0214



11. Service Positions

Note:

For description of the disassembling procedure, see the section 9.

11.1. Checking and Repairing of Power P.C.B.

1. Top Case

Remove 2 Screws (A) on side

Remove 3 rear Screws (B) on rear

Remove Top Case

2. Front Panel

Unlock 2 Locking Tabs on side

Unlock 3 Locking Tabs on bottom

Remove Front Panel

3. HDD & HDD Bracket

Remove one Screw fixing RAM Drive
-HDD FFC

Disconnect 2 Connectors

Remove 4 Screws fixing HDD Bracket

Lift up HDD Bracket with HDD

4. Power P.C.B.

Remove 1 Screw for AC Inlet fixing

Remove Connector to Main P.C.B.

Unlock 2 Locking Tabs and a Flange

Remove Power P.C.B.

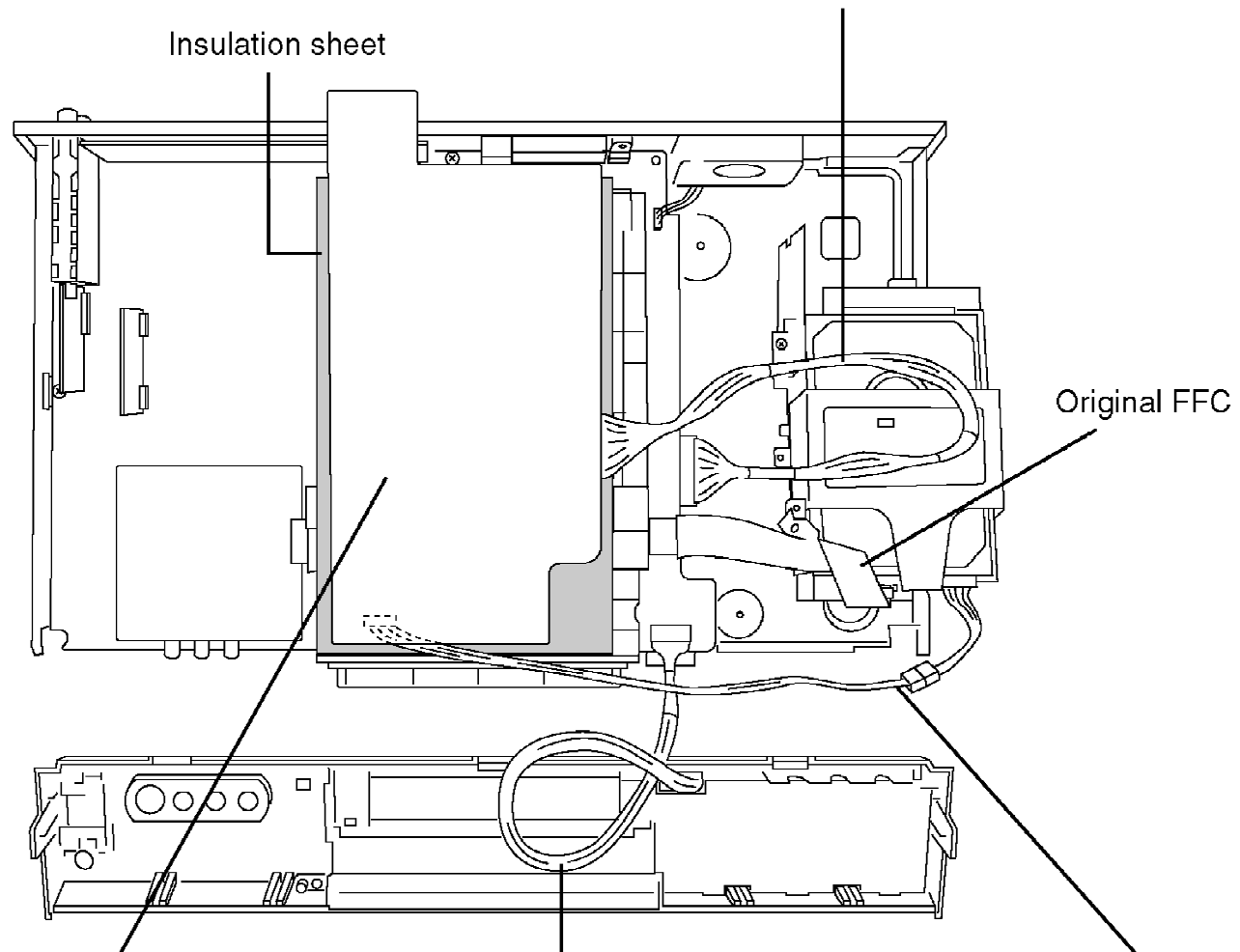
Connect Extension Cables between
Main P.C.B. and Power P.C.B.
(RFKZ0216), and between
Main P.C.B. and Front (R) P.C.B.
(RFKZ0215), and between
Power P.C.B. and HDD (RFKZ0169),
and between DVD-RAM Drive and
HDD (Original FFC)

Put Power P.C.B. on insulation sheet
so that it's foil side faces top.

Caution:

Red wire in the extension cable should be connected to (1) pin.

Extension Cable between
Main P.C.B. and Power P.C.B.
(RFKZ0216)



/
Foil side of Power P.C.B.

|
Extension Cable between
Main P.C.B. and Front (R) P.C.B.
(RFKZ0215)

\
Extension Cable between
Power P.C.B. and HDD
(RFKZ0169)

11.2. Checking and Repairing of Main P.C.B.

1. Top Case

Remove 2 Screws (A) on side

Remove 3 rear Screws (B) on rear

Remove Top Case

2. Front Panel

Unlock 2 Locking Tabs on side

Unlock 3 Locking Tabs on bottom

Remove Front Panel

3. Rear Panel

Remove 9 Screws(A) and Screw(B)

Remove Fan Connector

Unlock 2 Locking Tabs on side

Remove Rear Panel with FAN

4. HDD & HDD Bracket

Remove one Screw fixing RAM Drive
-HDD FFC

Disconnect 2 Connectors

Remove 4 Screws fixing HDD Bracket

Lift up HDD Bracket with HDD

6. Main P.C.B. and Power P.C.B.

Disconnect Connector between Main
P.C.B. and Power P.C.B.

Remove 7 Screws (A) and Screws (B)
fixing Main P.C.B.

Unlock 2 Locking Tabs for Power P.C.B.

Remove a Flange for Power P.C.B.

Remove Main P.C.B. and Power P.C.B.
from Chassis, and put Main P.C.B. so that
it's foil side faces top. Put Insulation Sheet
on DVD-RAM Drive, then place Power
P.C.B. on Insulation Sheet

Connect Extension Cables between
Main P.C.B. and Front P.C.B. (RFKZ0215)
, between Main P.C.B. and Power P.C.B.
(RFKZ0216), and between Main P.C.B.
and DVD-RAM Drive (RFKZ0197) , and
between Digital P.C.B. and DVD-RAM
Drive (RFKZ0125), and between
Main P.C.B. and Fan (RFKZ0168), and

5. DVD-RAM Drive

Remove FFC to Digital P.C.B.

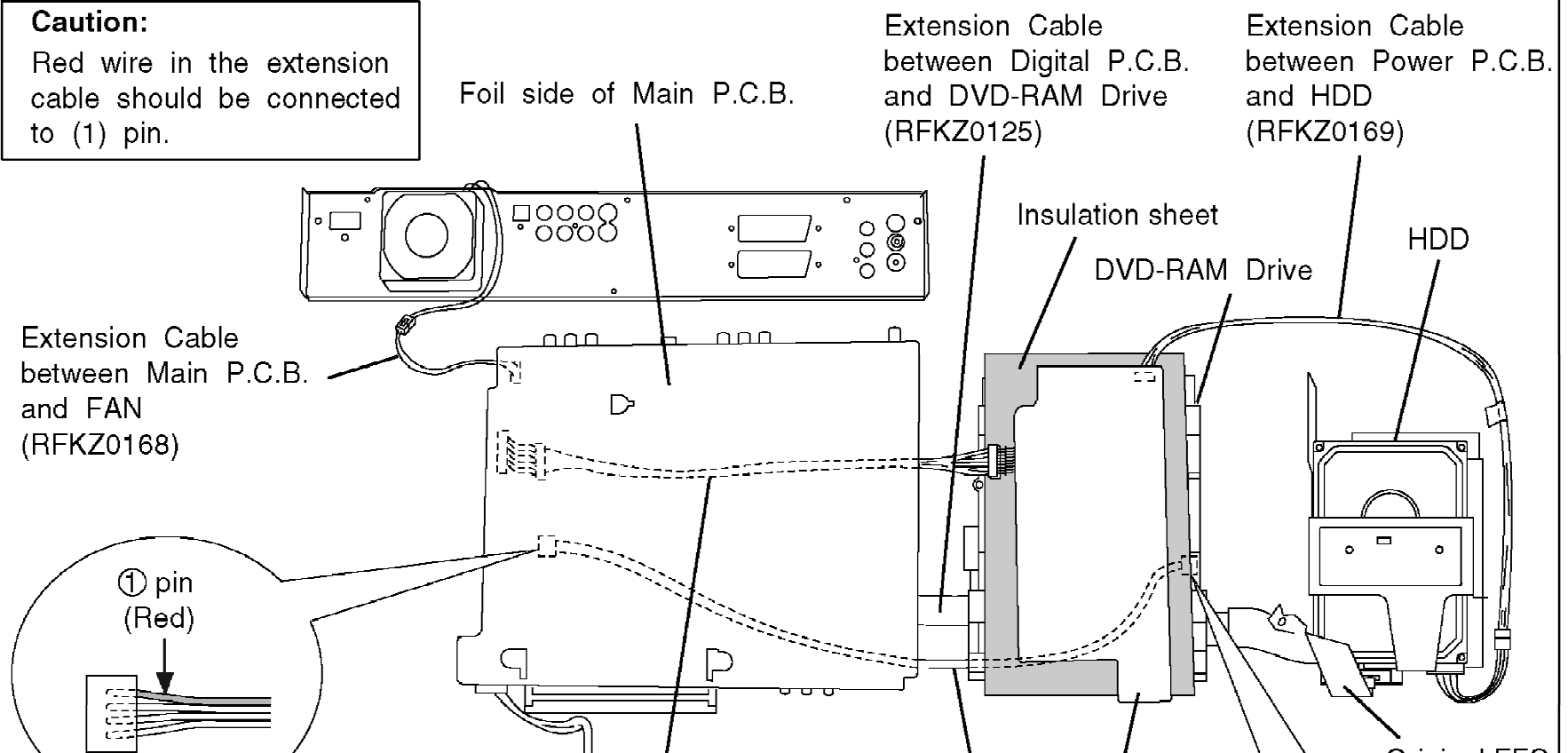
Remove 3 Screws fixing RAM-Drive

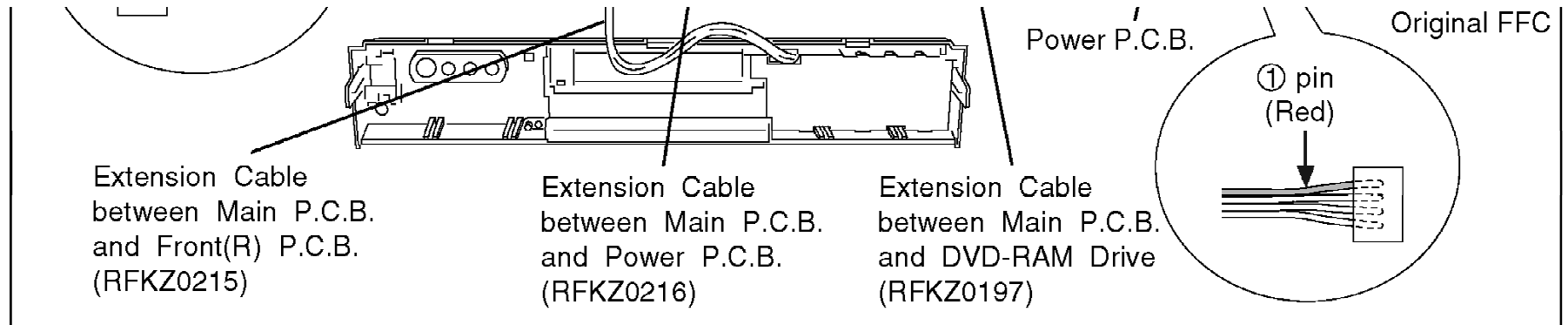
Lift up DVD-RAM Drive to remove it

between Power P.C.B. and HDD
(RFKZ0169), and between DVD-RAM
Drive and HDD (Original FFC)

Caution:

Red wire in the extension
cable should be connected
to (1) pin.





11.3. Checking and Repairing of Digital P.C.B.

1. Top Case

Remove 2 Screws (A) on side

Remove 3 rear Screws (B) on rear

Remove Top Case

2. Digital P.C.B.

Remove FFC to RAM-Drive

Unlock a Rocking Spacer

Remove a Screw fixing Digital P.C.B.

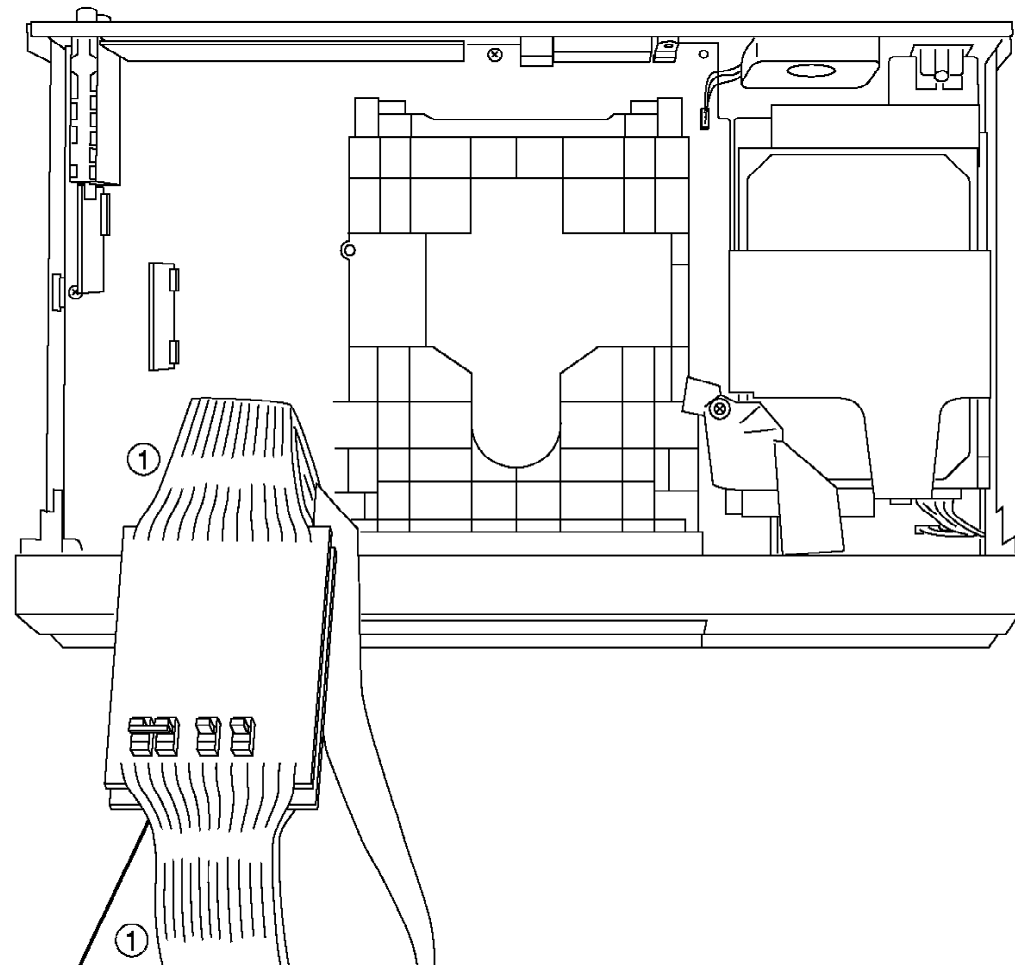
Lift up Digital P.C.B. to remove it

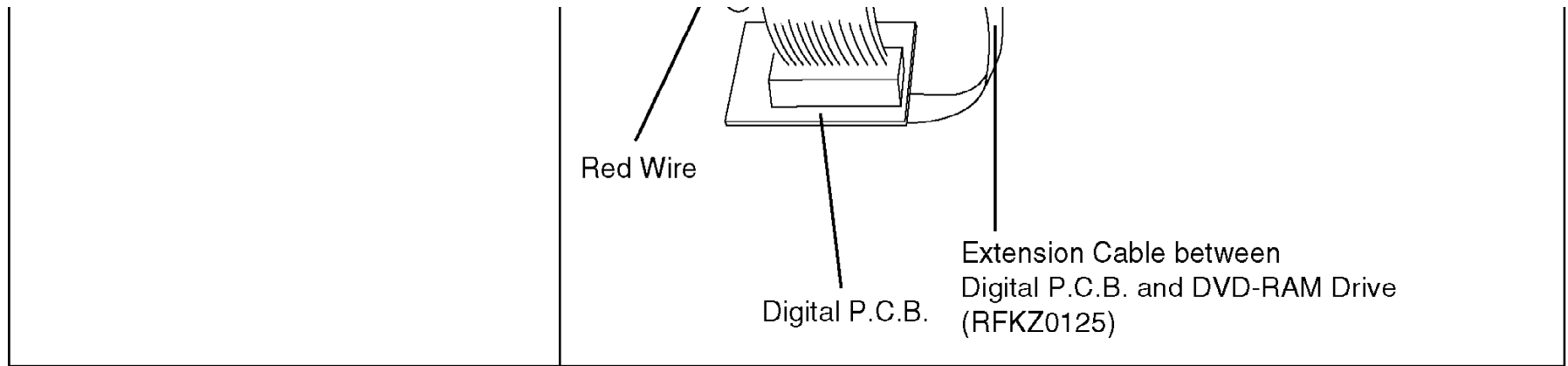
Connect Extension Cables between Main P.C.B. and Digital P.C.B. (RFKZ0214), and between Digital P.C.B. and DVD-RAM Drive (RFKZ0125).

Extension Cable between Main P.C.B. and Digital P.C.B. (RFKZ0214)

Caution:

Red wire in the extension cable should be connected to (1) pin.





11.4. Checking and Repairing of DVD-RAM Drive

1. Top Case

Remove 2 Screws (A) on side

Remove 3 rear Screws (B) on rear

Remove Top Case

2. Front Panel

Unlock 2 Locking Tabs on side

Unlock 3 Locking Tabs on bottom

Remove Front Panel

3. HDD

Remove one Screw

Disconnect 2 Connectors

Remove 4 Screws fixing HDD Bracket

Lift up HDD Bracket with HDD

4. DVD-RAM Drive

Remove 3 Screws fixing RAM Drive

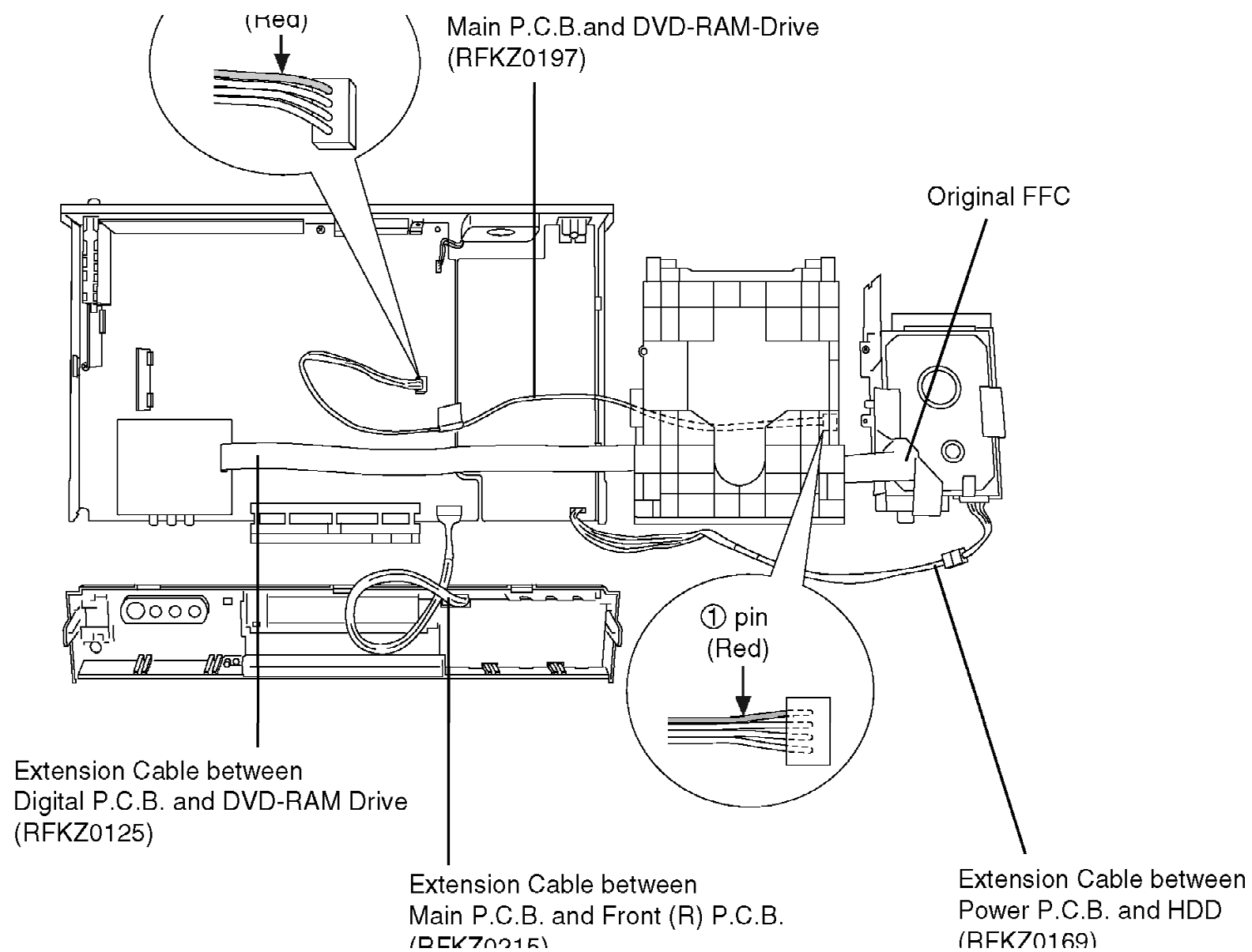
Remove FFC to Digital P.C.B.

Lift up DVD-RAM Drive to remove it

Connect Extension Cables between Main P.C.B. and DVD-RAM Drive (RFKZ0197), between Digital P.C.B. and DVD-RAM Drive (RFKZ0125), and between Main P.C.B. and Front (R) P.C.B. (RFKZ0215), between Power P.C.B. and HDD (RFKZ0169), and between DVD-RAM Drive and HDD (Original FFC)

① pin
(Red)

Extension Cable between
Main P.C.B. and DVD-RAM Drive



11.5. Checking and Repairing of HDD

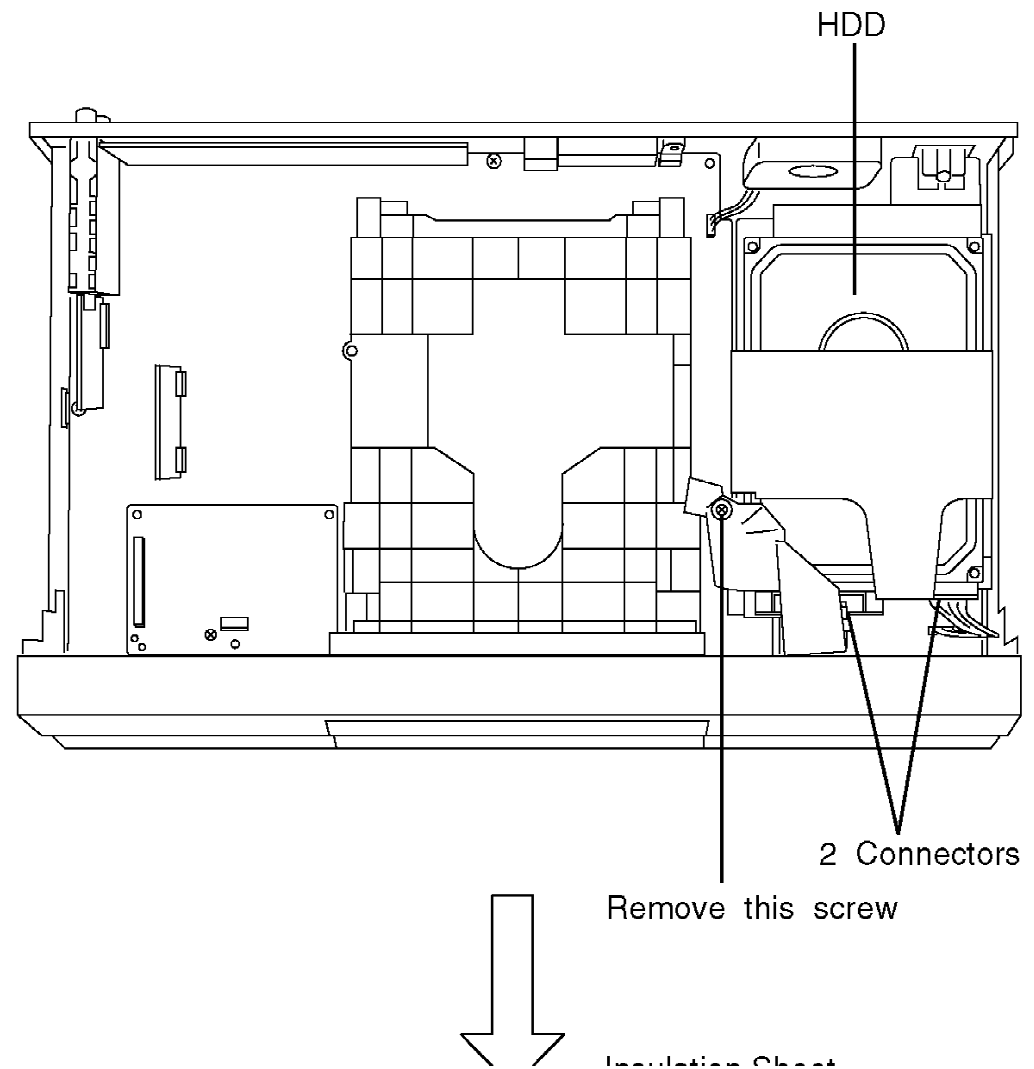
1. Top Case

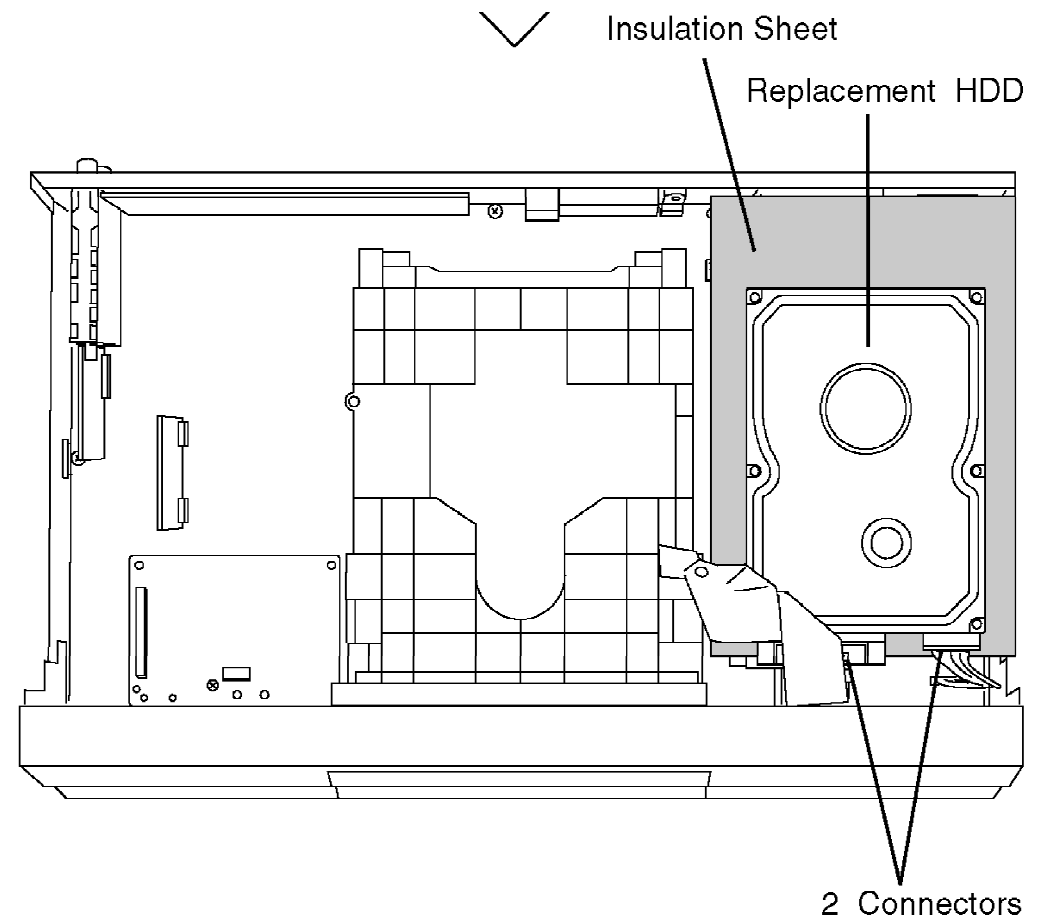
Remove 2 Screws (A) on side

Remove 3 rear Screws (B).on rear

Remove Top Case

- ↓
- (1) Remove one Screw fixing RAM Drive-HDD FFC
 - (2) Disconnect 2 Connectors
 - (3) Put a Insulation Sheet on HDD
 - (4) Put Replacement HDD on the Insulation Sheet
 - (5) Connect 2 Connectors to Replacement HDD





12. Adjustment Procedures

12.1. After replacing the RAM Drive with new one

After replacing of RAM drive unit, TEST mode is not necessary. Please confirm operation for RAM drive.

12.2. When the unit does not operate normally after replacing the Timer Microprocessor with new one

in order to transmit the

Step	Operation	Descriptions
1	While power is ON, short IC7508-4 pin (RESET) and the GND.	“RESET (L)” is transmitted to the reset terminal of Timer Microprocessor (IC7501-11 pin), then the unit operates normally.

13. Standard Inspection Specifications after Making Repairs

After making repairs, we recommend performing the following inspection, to check normal operation.

No.	Procedure	Item to Check
1	Turn on the power, and confirm items pointed out.	Items pointed out should reappear.
2	Insert RAM disc.	The Panasonic RAM disc should be recognized.
3	Enter the EE (TU IN / AV IN - AV OUT) mode.	No abnormality should be seen in the picture, sound or operation.
4	Perform auto recording and playback for one minute using the RAM disc.	No abnormality should be seen in the picture, sound or operation.
5	Model with the HDD : Perform auto recording and playback for one minute using the HDD	No abnormality should be seen in the picture, sound or operation. *Panasonic DVD-R disc should be used when recording and playback.
6	If a problem is caused by a VCD, DVD-R, DVD-Video, Audio-CD, or MP3, playback the test disc.	No abnormality should be seen in the picture, sound or operation.
7	After checking and making repairs, upgrade the firmware to the latest version.	Make sure that [FIRM_SUCCESS] appears in the FL displays. *[UNSUPPORT] display means the unit is already updated to newest same version. Then version up is not necessary.
8	Transfer [9][9] in the service mode setting, and initialize the service settings (return various settings and error information to their default values. The laser time is not included in this initialization).	Make sure that [CLR SERV] appears in the FL display. After checking it, turn the power off.
9	When replacing of RAM drive, transfer [9] [5] in the service mode setting to delete Laser used time.	Make sure that [CLR LASER] appears in the FL display. After that, turn power off.

Use the following checklist to establish the judgement criteria for the picture and sound.

Item	Contents	Check	Item	Contents	Check
Picture	Block noise		Sound	Distorted sound	
	Crosscut noise			Noise (static, background noise, etc.)	
	Dot noise			The sound level is too low.	
	Picture disruption			The sound level is too high.	
	Not bright enough			The sound level changes.	
	Too bright				
	Flickering color				
	Color fading				

14. Voltage and Waveform Chart

Note)

- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard.
Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.

14.1. Power P.C.B.



14.2. Main P.C.B.



14.3. Nicam Decoder P.C.B.



14.4. Scart P.C.B.



14.5. Front (R) P.C.B.



14.6. P9001 Connector



14.7. Waveform Chart

Note:

The waveforms are measured with PAL colour bar signal.



15. Abbreviations

INITIAL/LOGO		ABBREVIATIONS	
A	A0~UP	ADDRESS	
	ACLK	AUDIO CLOCK	
	AD0~UP	ADDRESS BUS	
	ADATA	AUDIO PES PACKET DATA	
	ALE	ADDRESS LATCH ENABLE	
	AMUTE	AUDIO MUTE	
	AREQ	AUDIO PES PACKET REQUEST	
	ARF		
	ASI	AUDIO RF	
	ASO	SERVO AMP INVERTED INPUT	
ASYNC		SERVO AMPOUTPUT	
		AUDIO WORD DISTINCTION	
		SYNC	
		INITIAL/LOGO	ABBREVIATIONS
B	BCK	BIT CLOCK (PCM)	
	BCKIN	BIT CLOCK INPUT	
	BDO	BLACK DROP OUT	
	BLKCK	SUB CODE BLOCK CLOCK	
	BOTTOM	CAP. FOR BOTTOM HOLD	
	BYP	BYPATH	
	BYTCK	BYTE CLOCK	

INITIAL/LOGO		ABBREVIATIONS		
C	CAV	CONSTANT ANGULAR		
	CBDO	VELOCITY		
	CD	CAP. BLACK DROP OUT		
	CDSCK	COMPACT DISC		
	CDSRDATA	CD SERIAL DATA CLOCK		
		CD SERIAL DATA		
	CDRF	CD RF (EFM) SIGNAL		
	CDV	COMPACT DISC-VIDEO		
	CHNDATA	CHANNEL DATA		
	CKSL	SYSTEM CLOCKSELECT		
	CLV	CONSTANT LINEAR VELOCITY		
	COFTR	CAP. OFF TRACK		
	CPA	CPU ADDRESS		
	CPCS	CPU CHIP SELECT		
	CPDT	CPU DATA		
	CPUADR	CPU ADDRESS LATCH		
	CPUADT	CPU ADDRESS DATA BUS		
	CPUIRQ	CPU INTERRUPT REQUEST		
	CPRD	CPU READ ENABLE		
	CPWR	CPU WRITE ENABLE		
CS	CHIPSELECT			
CSYNCIN	COMPOSITE SYNC IN			
CSYNCOUT	COMPOSITE SYNC OUT			
		INITIAL/LOGO	ABBREVIATIONS	
		D	DACCK	D/A CONVERTER CLOCK
			DEEMP	DEEMPHASIS BIT ON/OFF
			DEMPH	DEEMPHASIS SWITCHING
			DIG0~UP	FL DIGIT OUTPUT
			DIN	DATA INPUT
			DMSRCK	DM SERIAL DATA READ
			DMUTE	CLOCK
			DO	DIGITAL MUTE CONTROL
			DOUT0~UP	DROP OUT
				DATAOUTPUT
			DRF	DATA SLICE RF (BIAS)
			DRPOUT	DROP OUT SIGNAL
			DREQ	DATA REQUEST
			DRESP	DATA RESPONSE
			DSC	DIGITAL SERVO CONTROLLER
			DSLIF	
			DVD	DATA SLICE LOOP FILTER
				DIGITAL VIDEO DISC

INITIAL/LOGO		ABBREVIATIONS		
E	EC	ERROR TORQUE CONTROL		
	ECR	ERROR TORQUE CONTROL REFERENCE		
	ENCSEL	ENCODER SELECT		
	ETMCLK ETSCLK	EXTERNAL M CLOCK (81MHz/ 40.5MHz) EXTERNAL S CLOCK (54MHz)		
F	FBAL	FOCUS BALANCE		
	FCLK	FRAME CLOCK		
	FE	FOCUS ERROR		
	FFI	FOCUS ERROR AMP		
	FEO	INVERTED INPUT		
	FG	FOCUS ERROR AMP OUTPUT		
	FSC	FREQUENCY GENERATOR		
	FSCK	FREQUENCY SUB CARRIER FS (384 OVER SAMPLING) CLOCK		
G	GND	COMMON GROUNDING (EARTH)		
H	HA0~UP	HOST ADDRESS		
	HD0~UP	HOST DATA		
	HINT	HOST INTERRUPT		
	HRXW	HOST READ/WRITE		
I	IECOUT	IEC958 FORMAT DATA OUTPUT		
	IPFRAG	INTERPOLATION FLAG		
	IREF	I (CURRENT) REFERENCE		
	ISEL	INTERFACE MODE SELECT		
INITIAL/LOGO		ABBREVIATIONS		
L	LDON	LASER DIODE CONTROL		
	LPC	LASER POWER CONTROL		
	LRCK	L CH/R CH DISTINCTION CLOCK		
M	MA0~UP	MEMORY ADDRESS		
	MCK	MEMORY CLOCK		
	MCKI	MEMORY CLOCK INPUT		
	MCLK	MEMORY SERIAL COMMAND CLOCK		
	MDATA	MEMORY SERIAL COMMAND DATA		
	MDQ0~UP	MEMORY SERIAL COMMAND DATA		
	MDQM	MEMORY DATA INPUT/OUTPUT		
	MLD	MEMORY DATA I/O MASK		
	MPEG	MEMORYSERIAL COMMAND LOAD		
		MOVING PICTURE EXPERTS GROUP		
O	ODC	OPTICAL DISC CONTROLLER		
	OFTR	OFF TRACKING		
	OSCI	OSCILLATOR INPUT		
	OSCO	OSCILLATOR OUTPUT		
	OSD	ON SCREEN DISPLAY		

INITIAL/LOGO		ABBREVIATIONS
P	P1~UP	PORT
	PCD	CD TRACKING PHASE
	PCK	DIFFERENCE
	PDVD	PLL CLOCK
	PEAK	DVD TRACKING PHASE
	PLLCLK	DIFFERENCE
	PLLOK	CAP. FOR PEAK HOLD
	PWMCTL	CHANNEL PLL CLOCK
	PWMDA	PLL LOCK
	PWMOA, B	PWM OUTPUT CONTROL
		PULSE WAVE MOTOR DRIVEA
		PULSE WAVE MOTOR OUT A, B

INITIAL/LOGO		ABBREVIATIONS
S	SBI0, 1	SERIAL DATA INPUT
	SBO0	SERIAL DATA OUTPUT
	SBT0, 1	SERIAL CLOCK
	SCK	SERIAL DATA CLOCK
	SCKR	AUDIO SERIAL CLOCK
	SCL	RECEIVER
	SCLK	SERIAL CLOCK
	SDA	SERIAL CLOCK
	SEG0~UP	SERIAL DATA
	SELCLK	FL SEGMENT OUTPUT
	SEN	SELECTCLOCK
	SIN1, 2	SERIAL PORT ENABLE
	SOUT1, 2	SERIAL DATA IN
	SPDI	SERIAL DATA OUT
	SPDO	SERIAL PORT DATA INPUT
	SPEN	SERIAL PORT DATA OUTPUT
	SPRCLK	SERIAL PORT R/W ENABLE
	SPWCLK	SERIAL PORT READ CLOCK
	SQCK	SERIAL PORT WRITE CLOCK
	SQCX	SUB CODE Q CLOCK
	SRDATA	SUBCODE Q DATA READ
	SRMADR	CLOCK
	SRMDT0~7	SERIAL DATA
		SRAM ADDRESS BUS
	SS	SRAM DATA BUS 0~7
	STAT	START/STOP
	STCLK	STATUS
	STD0~UP	STREAM DATA CLOCK
	STENADR	STREAM DATA

INITIAL/LOGO		ABBREVIATIONS		STENABLE	STREAM DATA
R	RE	READ ENABLE			STREAM DATA INPUT ENABLE
	RFENV	RF ENVELOPE		STSEL	STREAM DATA POLARITY
	RFO	RF PHASE DIFFERENCE		STVALID	SELECT
	RS	OUTPUT		SUBC	STREAM DATAVALIDITY
	RSEL	(CD-ROM) REGISTER SELECT		SBCK	SUB CODE SERIAL
	RST	RF POLARITY SELECT		SUBQ	SUB CODE CLOCK
	RSV	RESET		SYSCLK	SUB CODE Q DATA
		RESERVE			SYSTEM CLOCK

INITIAL/LOGO		ABBREVIATIONS
T	TE	TRACKING ERROR
	TIBAL	BALANCE CONTROL
	TID	BALANCE OUTPUT 1
	TIN	BALANCE INPUT
	TIP	BALANCE INPUT
	TIS	BALANCE OUTPUT 2
	TPSN	OP AMP INPUT
	TPSO	OP AMP OUTPUT
	TPSP	OP AMP INVERTED INPUT
	TRCRS	TRACK CROSSIGNAL
	TRON	TRACKING ON
	TRSON	TRAVERSE SERVO ON

INITIAL/LOGO			ABBREVIATIONS	
V	VBLANK	V BLANKING	X	X
	VCC	COLLECTOR POWER SUPPLY VOLTAGE		XALE
	VCDCONT	VIDEO CD CONTROL (TRACKING BALANCE)		XAREQ
	VDD	DRAIN POWER SUPPLY VOLTAGE		XCDROM
	VFB	VIDEO FEED BACK VOLTAGE REFERENCE		XCS
	VREF	SOURCE POWER SUPPLYVOLTAGE		XCSYNC
	VSS			XDS
				XHSYNCO
				XHINT
				XI
W	WAIT	BUS CYCLE WAIT		XINT
	WDCK	WORD CLOCK		XMW
	WEH	WRITE ENABLE HIGH		XO
	WSR	WORD SELECT RECEIVER		XRE
				XSRMCE
				XSRMOE
				XSRMWE
				XVCS
				XVDS
				XVSYNCO
				X' TAL
				X ADDRESS LATCH ENABLE
				X AUDIO DATA REQUEST
				X CD ROM CHIP SELECT
				X CHIP SELECT
				X COMPOSITE SYNC
				X DATA STROBE
				X HORIZONTAL SYNC OUTPUT
				XH INTERRUPTREQUEST
				X' TAL OSCILLATOR INPUT
				X INTERRUPT
				X MEMORY WRITE ENABLE
				X' TAL OSCILLATOR OUTPUT
				X READ ENABLE
				X SRAM CHIP ENABLE
				X SRAM OUTPUT ENABLE
				X SRAM WRITE ENABLE
				X V-DEC CHIPSELECT
				X V-DEC CONTROL BUS STROBE
				X VERTICAL SYNC OUTPUT

16. Block Diagram

16.1. Power Supply Block Diagram



16.2. Analog Video Block Diagram



16.3. Analog Audio Block Diagram



16.4. Timer Block Diagram



16.5. Digital Block Diagram



16.6. Digital Block IC Pin Terminal Chart



17. Schematic Diagram

17.1. Interconnection Schematic Diagram



17.2. Main Power Supply Schematic Diagram



17.3. Sub Power Supply Section (Main P.C.B. (1/5)) Schematic Diagram (P)



17.4. Main Net Section (Main P.C.B. (2/5)) Schematic Diagram (M)



17.5. Video I/O Section (Main P.C.B. (3/5)) Schematic Diagram (V)



17.6. Audio Main Section (Main P.C.B. (4/5)) Schematic Diagram (A)



17.7. Timer Section (Main P.C.B. (5/5)) Schematic Diagram (T)



17.8. Glue Net Section (Digital P.C.B. (1/5)) Schematic Diagram (GN)



17.9. AV Encoder Section (Digital P.C.B. (2/5)) Schematic Diagram (EN)



17.10. Real Time Stream Control (RTSC) Section (Digital P.C.B. (3/5)) Schematic Diagram (TR)



17.11. AV Decoder/Main CPU Section (Digital P.C.B. (4/5)) Schematic Diagram (MC)



17.12. Audio I/O Section (Digital P.C.B. (5/5)) Schematic Diagram (AI)



17.13. VIF Decoder Schematic Diagram



17.14. Nicam Decoder Schematic Diagram



17.15. Scart Schematic Diagram



17.16. Front (R) Schematic Diagram



18. Print Circuit Board

18.1. Power P.C.B.



18.2. Main P.C.B.

18.2.1. Main P.C.B. (1/4 Section)



18.2.2. Main P.C.B. (2/4 Section)



18.2.3. Main P.C.B. (3/4 Section)



18.2.4. Main P.C.B. (4/4 Section)



18.2.5. Main P.C.B. Address Information



18.3. Digital P.C.B.

18.3.1. Digital P.C.B. (Component Side)



18.3.2. Digital P.C.B. (Foil Side)



18.3.3. Digital P.C.B. Address Information



18.4. VIF Decoder P.C.B.



18.5. Nicam Decoder P.C.B.



18.6. Scart P.C.B.

18.6.1. Scart P.C.B. (Section 1/2)



18.6.2. Scart P.C.B. (Section 2/2)



18.7. Front (R) P.C.B.



19. Exploded Views

19.1. Casing Parts & Mechanism Section 1



19.2. Casing Parts & Mechanism Section 2



19.3. Packing & Accessories Section



20. Replacement Parts List

Notes:

*Important safety notice:

Components identified by  mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

When replacing any of components, be sure to use only manufactures specified parts shown in the parts list.





*Warning: This product uses a laser diode. Refer to caution statements.

*Capacity values are in microfarads (μ F) unless specified otherwise, P=Pico-farads (pF), F=Farads (F).







*Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM), 1M=1,000k (OHM).

*The marking (RTL) indicates the retention time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.

*“<IA>”-“<ID>”, marks in Remarks indicate languages of instruction manuals. [<IA>: English/ Chinese, <IB>: English, <IC>:Chinese, <ID>: English/ Arabic] All parts are supplied by S.P.C..

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
■	01	CASING/ACCESSORY/PACKING		
<u>1</u>	ETXMM507E4F	POWER SUPPLY P.C.B.	1	(RTL) 
<u>2</u>	REP3766C	MAIN P.C.B.	1	(RTL)
<u>2-1</u>	VEP07A71N	VIF P.C.B.	1	(RTL)
<u>2-1-1</u>	VMP5897	VIF ANGLE	1	
<u>2-2</u>	VEP07A51A	NICAM DECORDER P.C.B.	1	(RTL)
<u>3</u>	RFKBE85HEE	DIGITAL P.C.B.	1	(EE)
3	RFKBE85HGCS	DIGITAL P.C.B.	1	(GCS)
3	RFKBE85HGN	DIGITAL P.C.B.	1	(GN)
<u>4</u>	L6FAKCCE0002	FAN MOTOR	1	
<u>5</u>	RGR0350C1E	REAR PANEL	1	(EE) 
5	RGR0350C1K	REAR PANEL	1	(GCS) 
5	RGR0350C1L	REAR PANEL	1	(GN) 
<u>6</u>	RKA0144-K	FOOT RUBBER	4	
7	VHD0690	SCREW	14	
8	XSN3+4FZ	SCREW	1	
9	RHD30111	SCREW	15	
10	RHD30115	SCREW	4	
<u>11</u>	RMX0298	PCB SPACER	1	
<u>12</u>	RYP1243B-S	FRONT PANEL ASS'Y1	1	(EE)
12	RYP1243D-S	FRONT PANEL ASS'Y1	1	(GN,GCS)
<u>12-1</u>	RKF0700-S	TRAY DOOR	1	
<u>12-2</u>	RGK1810-S	TRAY ORNAMENT	1	
<u>12-3</u>	VMB3410	TRAY SPRING	1	
<u>12-4</u>	RGU2318A-S	OPERATION BUTTON	1	
<u>12-5</u>	RGU2289-S	POWER BUTTON	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
12-6	RGU2291A-Q	REC BUTTON	1	
12-7	RGK1774-S	FRONT ORNAMENT(L)	1	
12-8	RGK1775-S	FRONT ORNAMENT(R)	1	
12-9	RGK1773-S	REC BUTTON RING	1	
12-10	RGL0663-Q	PANEL LIGHT	1	
12-11	RKF0689B-S	PANEL DOOR	1	(EE)
12-11	RKF0689D-S	PANEL DOOR	1	(GN,GCS)
12-12	RGK1811-S	FL ORNAMENT	1	
12-13	VGB0560	PANASONIC BADGE	1	
12-14	RHD26016	SCREW	1	
12-15	RMX0299	DAMPER SHEET	1	
12-16	RMR1637-W	REFLECTOR DVD	1	
12-17	RMR1638-W	REFLECTOR HDD	1	
12-18	XTN2+6G	SCREW	2	
12-19	RMR1655-W	REFLECTOR COVER	1	
13	REP3713B	FRONT(R) P.C.B.	1	(RTL)
14	RMC0595	EARTH PLATE	1	
15	RMA1778	FRONT ANGLE	1	
16	XTBS26+10J	SCREW	6	
17	RHD30113	SCREW	2	
18	RKM0508-S	TOP COVER	1	
19	REP3682A	SCART P.C.B.	1	(RTL)
20	VXY1814	RAM DRIVE UNIT	1	(RTL)
21	RFKV0033HDK	HDD 80GB	1	
22	VEK0G75	FFC(42P)	1	
23	VEE0Z41	WIRE WITH CONNECTOR	1	
24	RMA1835	HDD HOLDER	1	
25	RMZ0747	INSULATED SHEET	1	
26	RMA1834	HDD BRACKET	1	
27	RXQ1208	SUPER SHEET UNIT	1	
28	K1MZ40Z00002	HDD CONNECTOR	1	
31	VWJ1724	FFC(42P)	1	
32	RMR1656-W	LED COVER	1	
33	RMV0282	BARRIER	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
<u>A1</u>	EUR7721KH0	REMOTE CONTROL ASS'Y	1	(EE)
A1	EUR7721KK0	REMOTE CONTROL ASS'Y	1	(GN,GCS)
<u>A1-1</u>	UR77EC2003A	BATTERY COVER	1	
<u>A2</u>	K2KA6CA00001	AV CORD	1	
<u>A3</u>	K2CJ2DA00011	AC CORD	1	(GN) 
A3	VJA0664	AC CORD	1	K2CR2DA00004 (GCS,EE) 
<u>A4</u>	VJA1089	RF COAXIAL CABLE	1	K1TWACC00001
<u>A5</u>	RPQF0250	ACCESSORY CASE	1	
<u>A6</u>	RPF0378	POLYETHYLENE BAG(F.B.)	1	
<u>A7</u>	RPQ1594	PAD	1	
<u>A8</u>	RQCA1119	HDD CAUTION SHEET	1	(GN)
A8	RQCA1223	HDD CAUTION SHEET	1	(EE)
A8	RQCA1224	HDD CAUTION SHEET	1	(GCS)
<u>A9</u>	RQCA1231	PAL PROGRESSIVE SHEET	1	
<u>A10</u>	RQCA1244	DVD-R REC SHEET	1	(GN)
A10	RQCA1246	DVD-R REC SHEET	1	(EE)
A10	RQCA1247	DVD-R REC SHEET	1	(GCS)
<u>A11</u>	RQCB1141	CCP CARD	1	(GN)
<u>A12</u>	RQT7460-R	OPERATING INSTRUCTIONS	1	<IA>(EE) 
A12	RQT7461-G	OPERATING INSTRUCTIONS	1	<IB>(GCS) 
A12	RQT7462-L	OPERATING INSTRUCTIONS	1	<IC>(GN) 
<u>A13</u>	RQCA1217	DISC CAUTION SHEET	1	(EE)
A13	RQCA1004	DISC CAUTION SHEET	1	(GN)
A13	RQCA1218	DISC CAUTION SHEET	1	(GCS)
<u>PC1</u>	RPG7134	PACKING CASE	1	(EE)
PC1	RPG7135	PACKING CASE	1	(GCS)
PC1	RPG7136	PACKING CASE	1	(GN)
<u>PC2</u>	RPN1706A	CUSHION A	1	
<u>PC3</u>	RPN1706B	CUSHION B	1	
<u>PC4</u>	VPF0505	POLYETHYLENE BAG(UNIT)	1	
	02	REP3766C		(MAIN P.C.B.)

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C1503	ECJ1VB1A105K	10V 1U	1	
C1504	ECJ1XB1C104K	16V 0.1U	1	
C1505	F2A1A470A388	10V 47U	1	
C1512	ECJ1VB0J105K	6.3V 1U	1	
C1513	ECJ1VB1A105K	10V 1U	1	
C1514	ECJ1VB0J105K	6.3V 1U	1	
C1515	ECJ1XB1C104K	16V 0.1U	1	
C1516	ECJ1VB1A105K	10V 1U	1	
C1518	F2A1A470A388	10V 47U	1	
C1519	ECJ1XB1C104K	16V 0.1U	1	
C1520	ECJ1VB1A105K	10V 1U	1	
C1521	ECJ1VB0J105K	6.3V 1U	1	
C1522	ECJ1VC1H331J	50V 330P	1	
C1523	ECJ1VB1A105K	10V 1U	1	
C1524	F2A1A470A388	10V 47U	1	
C1527,28	ECJ1VB0J105K	6.3V 1U	2	
C1531	F2A1A470A388	10V 47U	1	
C1533,34	ECJ1VB0J105K	6.3V 1U	2	
C1537	EEUFC1E101S	25V 100U	1	
C1539	F2A0J102A256	6.3V 1000U	1	
C1540	F2A1E4700048	25V 47U	1	
C1541	F2A1A471A211	10V 470U	1	
C1543	F2A1E221A210	25V 220U	1	
C3003	ECJ1VB1H103K	50V 0.01U	1	
C3004	ECEA1AKS221	10V 220U	1	
C3005	ECJ1VB1C333K	16V 0.033U	1	
C3006	ECJ1XB1C104K	16V 0.1U	1	
C3007	ECJ1VB1H103K	50V 0.01U	1	
C3009,10	ECJ1VB1H103K	50V 0.01U	2	
C3012-17	ECJ1VB1H103K	50V 0.01U	6	
C3018	ECEA0JKS101	6.3V 100U	1	
C3019-21	ECJ1VB1H103K	50V 0.01U	3	
C3022	ECEA0JKS220	6.3V 22U	1	
C3023	ECEA0JKN470	6.3V 47U	1	



Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C3024	ECEA0JKS220	6.3V 22U	1	
C3025-29	ECEA0JKN470	6.3V 47U	5	
C3030,31	ECJ1VB1H103K	50V 0.01U	2	
C3032	ECEA0JKS331	6.3V 330U	1	
C3033	ECEA1CKS220	16V 22U	1	
C3034	ECEA0JKS331	6.3V 330U	1	
C3035	ECEA1CKS220	16V 22U	1	
C3036	ECEA0JKS331	6.3V 330U	1	
C3037	ECEA1CKS220	16V 22U	1	
C3038	ECJ1XB1C104K	16V 0.1U	1	
C3039	ECJ1VB0J105K	6.3V 1U	1	
C3040	ECJ1VB1H103K	50V 0.01U	1	
C3041	ECEA1AKS221	10V 220U	1	
C3042	ECJ1VB0J105K	6.3V 1U	1	
C3045,46	ECEA0JKN470	6.3V 47U	2	
C3047	ECJ1XB1C104K	16V 0.1U	1	
C3048	ECA0JM102	6.3V 1000U	1	
C3049	ECEA0JKS101	6.3V 100U	1	
C3051	ECA0JM102	6.3V 1000U	1	
C3052	ECEA0JKS101	6.3V 100U	1	
C3053	ECA0JM102	6.3V 1000U	1	
C3054	ECEA0JKS101	6.3V 100U	1	
C3055,56	ECEA0JKS331	6.3V 330U	2	
C3057-60	ECJ1VC1H471J	50V 470P	4	
C3061,62	ECJ1VC1H470J	50V 47P	2	
C3064	ECJ1XB1C104K	16V 0.1U	1	
C3065	ECJ1VB1H103K	50V 0.01U	1	
C3066,67	ECJ1VB0J105K	6.3V 1U	2	
C3069-71	ECJ1VB1H103K	50V 0.01U	3	
C4003,04	ECJ1VB1H103K	50V 0.01U	2	
C4005-07	F2A1H1R0A236	50V 1U	3	
C4008	F2A1C221A019	16V 220U	1	
C4010	F2A1H1R0A236	50V 1U	1	
C4012	ECJ2VB1E104K	25V 0.1U	1	
C4014	F2A1H100A236	50V 10U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C4017	F2A1H100A236	50V 10U	1	
C4019	VCEA1CAE100	16V 10U	1	F2A1C1000008
C4021	VCEA1CAE100	16V 10U	1	F2A1C1000008
C4022	ECJ1XB1C104K	16V 0.1U	1	
C4023	F2A1H1R0A236	50V 1U	1	
C4024	F2A1C471A236	16V 470U	1	
C4025	F2A1H1R0A236	50V 1U	1	
C4026	ECJ1VF1C104Z	16V 0.1U	1	
C4027	F2A1H1R0A236	50V 1U	1	
C4029	F2A1C471A236	16V 470U	1	
C4030	ECJ1VF1C104Z	16V 0.1U	1	
C4031	F2A1H1R0A236	50V 1U	1	
C4033,34	F2A1C4700011	16V 47U	2	
C4039,40	ECJ1VC1H100C	50V 10P	2	
C4052	ECJ1VF1C104Z	16V 0.1U	1	
C4053	ECJ1XB1C104K	16V 0.1U	1	
C4054	F2A0J470A179	6.3V 47U	1	
C4055	ECJ1VF1C104Z	16V 0.1U	1	
C4056	F2A0J471A247	6.3V 470U	1	
C4057	ECJ2VC1H680J	50V 68P	1	
C4059	ECQV1H104JL	50V 0.1U	1	
C4060	ECJ2VC1H680J	50V 68P	1	
C4061	ECJ1VF1C104Z	16V 0.1U	1	
C4062	ECA1AM221	10V 220U	1	
C4063,64	F2A1C4700011	16V 47U	2	
C4065	ECJ1VF1C104Z	16V 0.1U	1	
C4067	F2A0J470A179	6.3V 47U	1	
C4069	ECJ1VF1C104Z	16V 0.1U	1	
C4070	ECA1AM221	10V 220U	1	
C4072	ECA1AM221	10V 220U	1	
C4074,75	ECJ1VF1C104Z	16V 0.1U	2	
C4076	F2A1C471A236	16V 470U	1	
C4077	ECJ1VF1C104Z	16V 0.1U	1	
C4082,83	ECJ2VC1H561J	50V 560P	2	
C4091	ECJ1VF1C104Z	16V 0.1U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C4092	F2A1C221A019	16V 220U	1	
C7401	F2A1C471A236	16V 470U	1	
C7402	ECJ1VB1H103K	50V 0.01U	1	
C7403	F2A0J470A179	6.3V 47U	1	
C7404	ECEA0JKS470	6.3V 47U	1	
C7405,06	ECJ1XB1C104K	16V 0.1U	2	
C7407	ECJ1VB1H103K	50V 0.01U	1	
C7408	ECJ1XB1C104K	16V 0.1U	1	
C7409	ECJ1VB1H103K	50V 0.01U	1	
C7411,12	ECJ1VB1H103K	50V 0.01U	2	
C7414	ECEA1HKS010	50V 1U	1	
C7415-17	ECEA0JKS470	6.3V 47U	3	
C7418,19	ECJ1VC1H330J	50V 33P	2	
C7420	ECJ1XB1C104K	16V 0.1U	1	
C7421,22	ECJ1VB1H103K	50V 0.01U	2	
C7423	ERJ3GEY0R00V	1/10W 0	1	
C7424	ECEA0JKS470	6.3V 47U	1	
C7425	ECJ1VC1H101J	50V 100P	1	
C7426	ECJ1XB1C104K	16V 0.1U	1	
C7427	ECJ1VB1H222K	50V 2200P	1	
C7428	ECJ2VB1H103K	50V 0.01U	1	
C7429	ECJ1XB1C104K	16V 0.1U	1	
C7431-33	ECEA0JKS470	6.3V 47U	3	
C7439	ECJ1XB1C104K	16V 0.1U	1	
C7440	ECEA0JKS470	6.3V 47U	1	
C7441	ECJ1XB1C104K	16V 0.1U	1	
C7502-04	F2A0J470A012	6.3V 47U	3	
C7507	VCE0073-T	CAPACITOR	1	F4D55473A005
C7508,09	ECJ1VC1H221J	50V 220P	2	
C7511	ECJ1VF1C104Z	16V 0.1U	1	
C7512	ECJ1VC1H470J	50V 47P	1	
C7513	ECJ1VC1H471J	50V 470P	1	
C7514	ECJ1VC1H470J	50V 47P	1	
C7515	ECJ1VC1H471J	50V 470P	1	
C7516,17	ECJ1XB1C104K	16V 0.1U	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C7525	ECJ1VC1H101J	50V 100P	1	
C7526	ECJ1XB1C104K	16V 0.1U	1	
C7527	F2A0J470A012	6.3V 47U	1	
C7528	ECJ1VF1C104Z	16V 0.1U	1	
C7529	F2A0J470A012	6.3V 47U	1	
C7546	ECJ1XB1C104K	16V 0.1U	1	
C7550	ECJ1VB1H103K	50V 0.01U	1	
C7551	ECA1HHG100	50V 10U	1	
C7552	ECJ1VF1H104Z	50V 0.1U	1	
C7555	F2A1E221A210	25V 220U	1	
C7556	ECA1CHG221	16V 220U	1	
C7558	ECA1VHG470	35V 47U	1	
C7559	ECQB1H223KF3	50V 0.022U	1	
C7560	ECA1HHG100	50V 10U	1	
C7562	ECJ2YB0J475K	6.3V 4.7U	1	
C7563	ECJ1VC1H101J	50V 100P	1	
C7565	ECJ2YB0J475K	6.3V 4.7U	1	
C7566,67	ECJ1XB1C104K	16V 0.1U	2	
C7568	VCEA0JBS101	6.3V 100U	1	F2A0J1010003
C7569	ECJ1VF1C104Z	16V 0.1U	1	
C7580-82	ECJ1VC1H100C	50V 10P	3	
C7583	ECJ1VC1H101J	50V 100P	1	
C7584,85	ECJ1VC1H180J	50V 18P	2	
C7586	ECJ1VC1H220J	50V 22P	1	
C7587	ECJ1VC1H180J	50V 18P	1	
C7588	ECJ1VB1H103K	50V 0.01U	1	
C7589	ECJ1VF1C104Z	16V 0.1U	1	
C7590	F2A0J470A012	6.3V 47U	1	
C7592,93	ECJ1VC1H100C	50V 10P	2	
C7594	F2A0J470A012	6.3V 47U	1	
C7595	ECJ1VB1H103K	50V 0.01U	1	
C7596	ECJ1VC1H470J	50V 47P	1	
C7597	ECJ1VB1H103K	50V 0.01U	1	
C7598	ECJ1VC1H470J	50V 47P	1	
C7599	ECJ1XB1C104K	16V 0.1U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C7600	ECJ1VC1H470J	50V 47P	1	
C7601	ECJ1XB1C104K	16V 0.1U	1	
C7602	ECJ1VB1H103K	50V 0.01U	1	
C7603	F2A0J470A012	6.3V 47U	1	
C7604	ECJ1XB1C104K	16V 0.1U	1	
C7605,06	ECJ1VC1H100C	50V 10P	2	
C7607	ECJ1VB1H103K	50V 0.01U	1	
C7608	F2A0J470A012	6.3V 47U	1	
C7609,10	ECJ1VC1H100C	50V 10P	2	
C7611-13	ECJ1VB1H103K	50V 0.01U	3	
C7618	ECJ1XB1C104K	16V 0.1U	1	
C7620	ECJ1VB1H103K	50V 0.01U	1	
C7626	ECJ1VB1H103K	50V 0.01U	1	
C7633	VCEA0JBS101	6.3V 100U	1	F2A0J1010003
C7636	ECJ1VB0J105K	6.3V 1U	1	
C7637	ECJ1VB1H103K	50V 0.01U	1	
C7639	ECJ1VF1C104Z	16V 0.1U	1	
C7646	ECJ1VB0J105K	6.3V 1U	1	
C7650	ECJ1VB1H103K	50V 0.01U	1	
C7652	ECJ1XB1C104K	16V 0.1U	1	
D1501	MA165TA5	DIODE	1	MA2C16500E
D4001	MA165TA5	DIODE	1	MA2C16500E
D4005,06	MA3Z142D0RG	DIODE	2	
D7401	MA165TA5	DIODE	1	MA2C16500E
D7402	MA4300N-M	DIODE	1	MAZ4300NM
D7403	MA165TA5	DIODE	1	MA2C16500E
D7501	MAZ4240NMF	DIODE	1	
D7502	B0AAGM000003	DIODE	1	B0AAGM000007
D7504,05	MA2C18500E	DIODE	2	
D7506	MAZ4300NLF	DIODE	1	
D7507	1SS355	DIODE	1	B0ACCK000005
D7508	B0JDCE000002	DIODE	1	
D7512	B3AEA0000049	DIODE	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
DP7501	A2BD00000074	FL DISPLAY TUBE	1	
DU7402	ENG47329G1Y	TV TUNERS	1	
IC1502	C0DBAHG00013	IC	1	
IC1505	C0CBCDD00008	IC	1	
IC1506	C0CBCDD00002	IC	1	
IC1507	C0CBCDD00006	IC	1	
IC1508	C0DBEGD00002	IC	1	
IC1509	C0DBEFG00003	IC	1	
IC1510	C0DBEGG00003	IC	1	
IC3001	C1AB00001979	IC	1	
IC3002	C1AB00001486	IC	1	
IC3003	C9ZB00000377	IC	1	
IC4001	C1AB00001920	IC	1	
IC4005	TC7W04FTE12L	IC	1	C0JBAB000178
IC4006	K7AAAB000013	IC	1	
IC4007	TC7SET08F	IC	1	C0JBAA000284
IC4009	C0ABBB000216	IC	1	
IC4010	C0DBZJE00003	IC	1	
IC4011	C0CBCDD00002	IC	1	
IC4012	C0ABBB000118	IC	1	
IC4013	AN78L09M	IC	1	
IC7401	C0DBZJE00003	IC	1	
IC7402	C0DBCHD00002	IC	1	
IC7403	C0DBZHG00016	IC	1	
IC7501	C2CBJG000399	IC	1	
IC7502	C0HBB0000033	IC	1	
IC7503	C0EBJ0000110	IC	1	
IC7504	C3EBJC000038	IC	1	
IC7505	C0EBE0000194	IC	1	
IC7506	NJM2904M	IC	1	C0ABBA000021
IC7508	C0EBE0000218	IC	1	
IP7501	ICP-N10T104	IC PROTECTOR	1	B1ZAZ0000035 

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
JK3001	K1U822B00003	JACK,AV4 IN/OUT	1	
JK7501	K1U415B00001	JACK,AV3	1	
K7401	ERJ3GEY0R00V	1/10W 0	1	
K7508	ERJ3GEY0R00V	1/10W 0	1	
K7510,11	ERJ3GEY0R00V	1/10W 0	2	
K7514,15	ERJ3GEY0R00V	1/10W 0	2	
L1501	G0A220G00018	COIL 22UH	1	
L4002	ELESE220KA	COIL 22UH	1	
L7401	G0A220G00018	COIL 22UH	1	
L7403	G0C2R2JA0019	COIL 2.2UH	1	
LB1501	J0JHC0000032	COIL	1	
LB1503	J0JHC0000032	COIL	1	
LB1504,05	J0JKB0000003	COIL	2	
LB3002-04	J0JHC0000032	COIL	3	
LB3005	J0JBC0000011	COIL	1	
LB3006	J0JGC0000020	COIL	1	
LB3007	J0JBC0000011	COIL	1	
LB3008	J0JGC0000020	COIL	1	
LB4001	J0JGC0000020	COIL	1	
LB7402	J0JHC0000032	COIL	1	
LB7404-10	J0JHC0000032	COIL	7	
LB7501,02	ERJ3GEY0R00V	1/10W 0	2	
LB7503	J0JKB0000037	COIL	1	
LB7504	J0JGC0000020	COIL	1	
LB7506,07	J0JGC0000020	COIL	2	
LB7508	VLP0175	COIL	1	J0JCC0000060
LB7509-11	J0JGC0000020	COIL	3	
LB7512-14	J0JCC0000103	COIL	3	
LB7515,16	J0JBC0000011	COIL	2	
P1501	K1KA08A00427	CONNECTOR(8P)	1	


Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
P1502	K1KA23A00004	CONNECTOR(23P)	1	
P7402	K1KA88A00002	CONNECTOR(88P)	1	
P7503	K1KA03A00173	CONNECTOR(3P)	1	
P7504	K1KB12B00049	CONNECTOR(12P)	1	
PP7401	VJP3042G020W	CONNECTOR(20P)	1	K1KA20A00203
PP7402	VJP3042G018W	CONNECTOR(18P)	1	K1KA18A00041
PP7403	K1KA15A00064	CONNECTOR(15P)	1	
Q3006,07	2SB1218A	TRANSISTOR	2	
Q3009,10	2SB1218A	TRANSISTOR	2	
Q4004	2SB1218A	TRANSISTOR	1	
Q4006-09	2SD132800L	TRANSISTOR	4	
Q7401	2SD1819AWL	TRANSISTOR	1	
Q7402	2SB1218A	TRANSISTOR	1	
Q7404-06	2SD0601A	TRANSISTOR	3	
Q7503	2SD1994B	TRANSISTOR	1	
Q7505	2SB0709ARL	TRANSISTOR	1	
Q7506	2SD1819AWL	TRANSISTOR	1	
Q7507	2SB0709ARL	TRANSISTOR	1	
Q7508	2SD1819AWL	TRANSISTOR	1	
Q7511	2SD0601A	TRANSISTOR	1	
Q7512	2SD0874A0L	TRANSISTOR	1	
Q7517	2SD0601A	TRANSISTOR	1	
Q7518	2SD1819AWL	TRANSISTOR	1	
Q7519	2SD0601A	TRANSISTOR	1	
QR3002,03	UN5212TX	TRANSISTOR	2	UNR521200L
QR4002-05	UN5211	TRANSISTOR	4	UNR5211
QR4012	UN5113TW	TRANSISTOR	1	
QR7401-03	UN5213TX	TRANSISTOR	3	UNR521300L
QR7404	UNR511400L	TRANSISTOR	1	
QR7405	UN5213TX	TRANSISTOR	1	UNR521300L
QR7501	UN5113TW	TRANSISTOR	1	
QR7502	UN5212TX	TRANSISTOR	1	UNR521200L

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
QR7503	UN5214TX	TRANSISTOR	1	UNR521400L
R1501	ERJ3GEYJ822V	1/10W 8.2K	1	D0GB822JA002
R1502	ERJ3GEYJ332V	1/10W 3.3K	1	D0GB332JA002
R1503	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R1504	ERDS2FJ271	1/4W 270	1	
R1506	ERDS2FJ271	1/4W 270	1	
R1507	ERJ3RED330	1/16W 33	1	
R1508	ERJ3RBD201	1/16W 200	1	
R1509	ERJ3RBD102V	1/16W 1K	1	
R1510	ERJ3RED220	1/16W 22	1	
R1511	ERJ3RBD182V	1/16W 1.8K	1	
R1512	ERJ3RBD202	1/16W 2K	1	
R1515,16	ERDS2FJ271	1/4W 270	2	
R3026	ERJ3RED150V	1/16W 15	1	
R3027,28	ERJ3RBD471V	1/16W 470	2	
R3029	ERJ3RBD104	1/16W 100K	1	
R3030	ERJ3GEYJ105V	1/10W 1M	1	
R3037	ERJ3GEYJ102V	1/10W 1K	1	
R3038	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R3044	ERJ3GEYJ330V	1/10W 33	1	D0GB330JA002
R3045,46	ERJ3GEYJ221V	1/10W 220	2	
R3047	ERJ3RBD153	1/16W 15K	1	
R3048	ERJ3RBD182V	1/16W 1.8K	1	
R3049	ERJ3RED330	1/16W 33	1	
R3050	ERJ3RBD182V	1/16W 1.8K	1	
R3051	ERJ3RED330	1/16W 33	1	
R3052,53	ERJ3GEYJ102V	1/10W 1K	2	
R3054-59	ERJ6GEYJ750V	1/8W 75	6	
R3060	ERJ3EKF75R0	1/10W 75	1	
R4001	ERJ6GEYJ102V	1/8W 1K	1	
R4002	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R4004	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R4005-07	ERJ3GEY0R00V	1/10W 0	3	
R4008,09	ERJ3GEYJ823V	1/10W 82K	2	D0GB823JA002

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R4010,11	ERJ3GEYJ101	1/10W 100	2	D0GB101JA002
R4012	ERJ3GEYJ333V	1/10W 33K	1	D0GB333JA002
R4013	ERJ6GEYJ102V	1/8W 1K	1	
R4014	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R4015	ERJ6GEYJ102V	1/8W 1K	1	
R4017	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R4018	ERJ3GEY0R00V	1/10W 0	1	
R4019,20	ERJ3GEYJ473V	1/10W 47K	2	D0GB473JA002
R4021,22	ERJ3GEYJ823V	1/10W 82K	2	D0GB823JA002
R4023	ERJ6GEYJ102V	1/8W 1K	1	
R4046,47	D0HB752ZA002	1/10W 7.5K	2	
R4053	JAR0816P103D	1/16W 10K	1	D0HB103ZA002
R4055	D0HB153ZA002	1/10W 15K	1	
R4056	JAR0816P103D	1/16W 10K	1	D0HB103ZA002
R4057	D0HB153ZA002	1/10W 15K	1	
R4060,61	ERJ3GEYJ103V	1/10W 10K	2	D0GB103JA002
R4066,67	JAR0816P103D	1/16W 10K	2	D0HB103ZA002
R4070	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R4071	ERJ3GEYJ473V	1/10W 47K	1	D0GB473JA002
R4074	ERJ3GEYJ473V	1/10W 47K	1	D0GB473JA002
R4076	ERJ3GEYJ821V	1/10W 820	1	
R4077	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R4078,79	ERJ3GEYJ272V	1/10W 2.7K	2	
R4080	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R4081	ERJ3GEYJ821V	1/10W 820	1	
R4087	ERJ3GEYJ102V	1/10W 1K	1	
R4088,89	ERJ3GEYJ272V	1/10W 2.7K	2	
R4090	ERJ3GEYJ221V	1/10W 220	1	
R4093	ERJ3GEYJ221V	1/10W 220	1	
R4099	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7401,02	ERJ3GEYJ103V	1/10W 10K	2	D0GB103JA002
R7403	ERJ3GEYJ392V	1/10W 3.9K	1	
R7404	ERJ3GEYJ472V	1/10W 4.7K	1	
R7405	ERDS2FJ471	1/4W 470	1	
R7406	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R7407	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R7408	ERJ3GEYD153V	1/10W 15K	1	D0HB153ZA002
R7411	ERG2SJ471E	2W 470	1	
R7412	ERJ3GEYJ681V	1/10W 680	1	D0GB681JA002
R7413,14	ERJ3GEYJ271V	1/10W 270	2	
R7415,16	ERJ3GEYJ471V	1/10W 470	2	
R7417	ERG2SJ471E	2W 470	1	
R7418	ERJ3GEYJ221V	1/10W 220	1	
R7420	ERJ3GEYJ102V	1/10W 1K	1	
R7421,22	ERJ3GEYJ101	1/10W 100	2	D0GB101JA002
R7427	ERJ3GEYJ102V	1/10W 1K	1	
R7428	ERJ3GEYJ333V	1/10W 33K	1	D0GB333JA002
R7429	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R7430	ERJ3GEYJ102V	1/10W 1K	1	
R7431	ERJ3GEYJ333V	1/10W 33K	1	D0GB333JA002
R7432	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R7433	ERJ3GEYJ102V	1/10W 1K	1	
R7434	ERJ3GEYJ333V	1/10W 33K	1	D0GB333JA002
R7435	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R7438-42	ERJ3GEYJ220V	1/10W 22	5	
R7444	ERJ3GEYJ681V	1/10W 680	1	D0GB681JA002
R7505	ERJ3RBD273V	1/16W 27K	1	
R7507	ERDS2FJ331	1/4W 330	1	
R7508	ERDS2FJ5R6	1/4W 5.6	1	
R7510	ERJ3GEYJ332V	1/10W 3.3K	1	D0GB332JA002
R7513	ERJ3GEYJ473V	1/10W 47K	1	D0GB473JA002
R7514	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7516	ERJ3GEYJ102V	1/10W 1K	1	
R7517	ERJ3GEYJ104	1/10W 100K	1	
R7518	ERJ3GEYJ392V	1/10W 3.9K	1	
R7519	ERJ3GEYJ102V	1/10W 1K	1	
R7520	ERJ3GEYJ104	1/10W 100K	1	
R7521	ERJ3GEYG152	1/10W 1.5K	1	
R7522	ERJ3GEYG562V	1/10W 5.6K	1	
R7523	ERJ3GEYD153V	1/10W 15K	1	D0HB153ZA002

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R7530	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R7531	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R7532	ERJ3GEYJ472V	1/10W 4.7K	1	
R7533	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R7534-37	ERJ3GEYJ101	1/10W 100	4	D0GB101JA002
R7538	ERJ3GEYJ472V	1/10W 4.7K	1	
R7539	ERJ3GEYJ104	1/10W 100K	1	
R7540	ERJ3GEYJ332V	1/10W 3.3K	1	D0GB332JA002
R7541	ERJ3GEY0R00V	1/10W 0	1	
R7542	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R7543-45	ERJ3GEYJ101	1/10W 100	3	D0GB101JA002
R7546,47	ERJ3GEYJ472V	1/10W 4.7K	2	
R7548	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7549	ERJ3GEYJ511	1/10W 510	1	
R7550,51	ERJ3GEYJ202V	1/10W 2K	2	
R7552	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7553	ERJ3GEYJ472V	1/10W 4.7K	1	
R7554	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7556-59	ERJ3GEYJ101	1/10W 100	4	D0GB101JA002
R7561	ERDS2TJ392	1/4W 3.9K	1	
R7562-64	ERJ3GEYJ101	1/10W 100	3	D0GB101JA002
R7567	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7569	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7571-78	ERJ3GEYJ101	1/10W 100	8	D0GB101JA002
R7579,80	ERJ3GEYJ221V	1/10W 220	2	
R7581	ERJ3GEYG393V	1/10W 39K	1	
R7582	ERJ3GEYG433	1/10W 43K	1	
R7583,84	ERJ3GEYJ473V	1/10W 47K	2	D0GB473JA002
R7585,86	ERJ3GEYJ223V	1/10W 22K	2	D0GB223JA002
R7588	ERJ3GEYJ472V	1/10W 4.7K	1	
R7589-91	ERJ3RBD822	1/10W 8.2K	3	
R7594	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R7595,96	ERJ3GEYJ473V	1/10W 47K	2	D0GB473JA002
R7597	ERJ3GEYD153V	1/10W 15K	1	D0HB153ZA002
R7598	ERJ3GEYJ181V	1/10W 180	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R7599	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R7600,01	ERJ3GEYJ103V	1/10W 10K	2	D0GB103JA002
R7602	ERJ3GEYJ821V	1/10W 820	1	
R7603	ERJ3GEYJ183V	1/10W 18K	1	D0GB183JA002
R7604-06	ERJ3EKF75R0	1/10W 75	3	
R7607	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R7608	ERJ3GEYJ104	1/10W 100K	1	
R7610-13	ERJ3GEYJ101	1/10W 100	4	D0GB101JA002
R7617	ERDS2FJ750	1/4W 75	1	
R7619	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7620	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R7621	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7625-30	ERJ3GEYJ101	1/10W 100	6	D0GB101JA002
R7631,32	ERJ3GEYJ102V	1/10W 1K	2	
R7633	ERJ3RBD103V	1/16W 10K	1	
R7634	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7635-37	ERJ3GEYJ103V	1/10W 10K	3	D0GB103JA002
R7638	ERJ3GEYJ472V	1/10W 4.7K	1	
R7639	ERJ3GEYJ473V	1/10W 47K	1	D0GB473JA002
R7640	ERJ3GEYJ225V	1/10W 2.2M	1	
R7641	ERJ3GEYJ273V	1/10W 27K	1	D0GB273JA002
R7642	ERJ3GEYJ224V	1/10W 220K	1	D0GB224JA002
R7643	ERJ3GEYJ104	1/10W 100K	1	
R7644	ERJ3GEYJ221V	1/10W 220	1	
R7645	ERJ3GEYJ104	1/10W 100K	1	
R7646,47	ERJ3GEYJ101	1/10W 100	2	D0GB101JA002
R7671	ERJ3GEYJ682V	1/10W 6.8K	1	D0GB682JA002
R7672	ERJ3GEYJ473V	1/10W 47K	1	D0GB473JA002
S7501	K0F111B00044	SWITCH(POWER)	1	
T7501	ETS13TB119AP	TRANSFORMER	1	
W500-05	ERJ3GEY0R00V	1/10W 0	6	
W507-23	ERJ3GEY0R00V	1/10W 0	17	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
W529,30	ERJ3GEY0R00V	1/10W 0	2	
W534-37	ERJ3GEY0R00V	1/10W 0	4	
W538,39	ERJ6GEY0R00V	1/8W 0	2	
W540-42	ERJ3GEY0R00V	1/10W 0	3	
X7501	H0D100500016	CRYSTAL OSCILLATOR	1	
X7502	H0A327200026	OSCILLATOR	1	
ZJ3001	VJR0978	EARTH ANGLE	1	K9ZZ00000424
ZJ7401-04	VJR0978	EARTH ANGLE	4	K9ZZ00000424
ZJ7501	VJR0978	EARTH ANGLE	1	K9ZZ00000424
■	03	VEP07A71N		(VIF P.C.B.)
C0701	ECEA1HKS010	50V 1U	1	
C0702	ERJ3GEYJ102V	1/10W 1K	1	
C0703	ECEA1HKS010	50V 1U	1	
C0704	ECJ1VB1E683K	25V 0.0683U	1	
C0705	ECJ1VB1E104K	25V 0.1U	1	
C0706	ECJ2XB1H333K	50V 0.033U	1	
C0707	ECEA1HKAR47B	50V 0.47U	1	
C0709,10	ECJ1VF1H103Z	50V 0.01U	2	
C0711	ECEA1CKS220	16V 22U	1	
C0712	ECJ1VF1C104Z	16V 0.1U	1	
C0713	ECEA0JKS101	6.3V 100U	1	
C0714	ECJ2XF1C105Z	16V 1U	1	
C0717	ECJ1VC1H180J	50V 18P	1	
C0721	ECUV1H470JCG	50V 47P	1	ECJ2VC1H470J
C0724	ECJ2VF1H103Z	50V 0.01U	1	
C0725	ECJ1VC1H030C	50V 3P	1	
C0727	ECJ1VC1H390J	50V 39P	1	
C0732	ECJ1VC1H101J	50V 100P	1	
IC0701	C1AB00001924	IC	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
K0709	ERJ3GEY0R00V	1/10W 0	1	
L0701	ELJNAR22JF	COIL 22UH	1	
L0703	ELJNA3R3JF	COIL 3.3UH	1	
LB0701	J0JBC0000041	COIL	1	
PK0701	VJR0826E009W	CONNECTOR(9P)	1	K1MR09A00028
PP0701	VJP3589E004B	CONNECTOR(4P)	1	K1KA04B00135
Q0702	2SB0709ARL	TRANSISTOR	1	
R0702	ERJ3GEYJ104	1/10W 100K	1	
R0703	ERJ3GEYJ102V	1/10W 1K	1	
R0704	ERJ6GEYG105	1/8W 1M	1	
R0705	ERJ6GEYJ472V	1/8W 4.7K	1	
R0707	ERJ3GEYJ393V	1/10W 39K	1	D0GB393JA002
R0708	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R0709	ERJ3GEY0R00V	1/10W 0	1	
R0711	ERJ3GEYJ510	1/10W 51	1	
R0714	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R0715	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R0719	ERJ3GEYJ472V	1/10W 4.7K	1	
R0725	ERJ6GEYJ101V	1/8W 100	1	
R0726	ERJ3GEYJ332V	1/10W 3.3K	1	D0GB332JA002
R0731	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R0732	ERJ3GEY0R00V	1/10W 0	1	
R0738	ERJ3GEY0R00V	1/10W 0	1	
R0740	ERJ3GEYJ271V	1/10W 270	1	
R0741	ERJ3GEYJ221V	1/10W 220	1	
R0742	ERJ6GEYJ471V	1/8W 470	1	
R0743	ERJ6GEYJ820V	1/8W 82	1	
R0747,48	ERJ3GEYJ271V	1/10W 270	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
VR0701	EVNCYAA03B14	V.R.	1	
W1-W3	ERJ8GEY0R00V	1/4W 0	3	
W4	ERJ6GEY0R00V	1/8W 0	1	
W5,W6	ERJ8GEY0R00V	1/4W 0	2	
W7,W8	ERJ6GEY0R00V	1/8W 0	2	
W9	ERJ8GEY0R00V	1/4W 0	1	
W10	ERJ3GEY0R00V	1/10W 0	1	
W12	ERJ3GEY0R00V	1/10W 0	1	
W13,14	ERJ8GEY0R00V	1/4W 0	2	
W16	ERJ8GEY0R00V	1/4W 0	1	
X0701	VLF1430	FILTER	1	J0B3955A0001
X0702	VLF1431	FILTER	1	J0B4055A0001
X0704	VLF1497	FILTER	1	
■	04	VEP07A51A		(NICAM DECORDER P.C.B.)
C7301	ECJ1VF1C104Z	16V 0.1U	1	
C7302	ERJ3GEY0R00V	1/10W 0	1	
C7303	ECEA0JKS101	6.3V 100U	1	
C7305	ECEA0JKS101	6.3V 100U	1	
C7306	ECJ1VF1H103Z	50V 0.01U	1	
C7307,08	ECJ1VC1H100C	50V 10P	2	
C7309-11	ECJ1VC1H101J	50V 100P	3	
C7312,13	ECEA1CKS100	16V 10U	2	
C7314	ECJ1VF1C104Z	16V 0.1U	1	
C7317	ECEA1CKA470	16V 47U	1	
C7318	ECEA1CKS100	16V 10U	1	
C7323	ECJ1VC1H102J	50V 1000P	1	
C7324	ECJ1VF1C104Z	16V 0.1U	1	
C7329	ERJ3GEY0R00V	1/10W 0	1	
C7330	ERJ3GEYJ822V	1/10W 8.2K	1	D0GB822JA002
C7332	ECJ1VF1C104Z	16V 0.1U	1	
C7333	ECJ1XB1C104K	16V 0.1U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C7334	ECEA1HKS2R2	50V 2.2U	1	
C7335	ECJ1VF1C104Z	16V 0.1U	1	
IC7301	TDA9874AH	IC	1	C1AB00001404
IC7302	PST7043-T	IC	1	C0EAH0000051
K7301-03	ERJ3GEY0R00V	1/10W 0	3	
K7305	ERJ3GEY0R00V	1/10W 0	1	
L7303	G0C1R0JA0019	COIL 1UH	1	
LB7301,02	J0JCC0000124	COIL	2	
LB7303	J0JCC0000080	COIL	1	
PK7301	VJR0777B007W	CONNECTOR(7P)	1	K1MM07B00002
PK7302	VJR0777B006W	CONNECTOR(6P)	1	K1MM06B00002
R7301	ERJ3GEY0R00V	1/10W 0	1	
R7304	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7307	ERJ3GEY0R00V	1/10W 0	1	
R7309	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R7311	ERJ3GEYJ221V	1/10W 220	1	
R7312,13	ERJ3RBD221	1/10W 220	2	
R7314,15	ERJ3GEY0R00V	1/10W 0	2	
R7317	ERJ3GEY0R00V	1/10W 0	1	
R7319	ERJ3GEY0R00V	1/10W 0	1	
R7322	ERJ3GEY0R00V	1/10W 0	1	
R7324,25	ERJ3GEYJ101	1/10W 100	2	D0GB101JA002
W6,W7	ERJ3GEY0R00V	1/10W 0	2	
X7301	H0D245500016	CRYSTAL OSCILLATOR	1	
■	05	REP3682A		(SCART P.C.B.)

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C3909	ECEA0JKS470	6.3V 47U	1	
C3910,11	ECA1CAK100XB	16V 10U	2	
C3914-17	ECA1HAK010XI	50V 1U	4	
C3918,19	ECA1CAK100XB	16V 10U	2	
C3920	ECJ1XB1C104K	16V 0.1U	1	
C3921	ECA0JAK331X	6.3V 330U	1	
C3922	ECJ1VB1H103K	50V 0.01U	1	
C3923	ECJ1XB1C104K	16V 0.1U	1	
C3924	ECA0JAK331X	6.3V 330U	1	
C3925	ECJ1VB1H103K	50V 0.01U	1	
C3928,29	ECA1HAK010XI	50V 1U	2	
C3930	ECJ1VB1H103K	50V 0.01U	1	
C3931,32	ECA1HAK010XI	50V 1U	2	
C3933	ECA1CAK101XB	16V 100U	1	
C3934	ECJ1VB1H103K	50V 0.01U	1	
C3935	ECA1CAK101XB	16V 100U	1	
C3938	ECJ1VF1C104Z	16V 0.1U	1	
C3939	ECJ1VB1H103K	50V 0.01U	1	
C3951,52	ECJ1VC1H470J	50V 47P	2	
C3953,54	ECJ1VC1H471J	50V 470P	2	
C3955,56	ECJ1VC1H101J	50V 100P	2	
C3957,58	ECJ1VC1H471J	50V 470P	2	
C3959,60	ECJ1VC1H470J	50V 47P	2	
C3961,62	ECJ1VC1H101J	50V 100P	2	
D3901	MA165TA5	DIODE	1	MA2C16500E
D3903	MA3Z142D0RG	DIODE	1	
IC3901	C1AB00001776	IC	1	
JK3901	K2HA306A0025	JACK,VIDEO OUT	1	
JK3904,05	K1FB121A0003	JACK,AV1/2	2	
LB3907,08	J0JGC0000020	COIL	2	
LB3911-13	J0JGC0000020	COIL	3	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
LB3922,23	J0JGC0000020	COIL	2	
LB3925	J0JGC0000020	COIL	1	
PS3901	VJS3042F020W	CONNECTOR(20P)	1	K1KB20B00027
PS3902	VJS3042F018W	CONNECTOR(18P)	1	K1KB18B00012
PS3903	K1KB15B00013	CONNECTOR(15P)	1	
Q3901	2SD1819AWL	TRANSISTOR	1	
Q3905	2SD132800L	TRANSISTOR	1	
Q3906	2SB710AQRSTX	TRANSISTOR	1	2SB0710AWL
Q3908	2SB1218A	TRANSISTOR	1	
Q3909,10	2SD132800L	TRANSISTOR	2	
QR3908	UN5212TX	TRANSISTOR	1	UNR521200L
QR3909	UN5211	TRANSISTOR	1	UNR5211
QR3913	UN5212TX	TRANSISTOR	1	UNR521200L
R3901-03	ERJ3RED750V	1/16W 75	3	
R3904	ERJ3GEYJ330V	1/10W 33	1	D0GB330JA002
R3905	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R3906	ERJ3GEYJ102V	1/10W 1K	1	
R3907	ERJ3GEYJ273V	1/10W 27K	1	D0GB273JA002
R3908,09	ERJ6GEYJ471V	1/8W 470	2	
R3910	ERJ3RBD151	1/16W 150	1	
R3911,12	ERJ3GEYJ222V	1/10W 2.2K	2	D0GB222JA002
R3913	ERJ3EKF1800	1/16W 180	1	
R3914	ERJ3RBD151	1/16W 150	1	
R3915	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R3916	ERJ3GEYD153V	1/10W 15K	1	D0HB153ZA002
R3917	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R3919	ERJ3RBD151	1/16W 150	1	
R3921	ERJ6ENF75R0	1/8W 75	1	
R3922,23	ERJ6GEYJ471V	1/8W 470	2	
R3924	ERDS2FJ471	1/4W 470	1	
R3925-28	ERJ6ENF75R0	1/8W 75	4	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R3929,30	ERJ6GEYJ471V	1/8W 470	2	
R3931-33	ERJ3RED750V	1/16W 75	3	
R3934,35	ERJ6ENF75R0	1/8W 75	2	
R3962	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R3967	ERJ3GEYJ152V	1/10W 1.5K	1	
R3968	ERJ3GEYJ680	1/10W 68	1	ERJ3GEYJ680V
R3969	ERJ3GEYJ332V	1/10W 3.3K	1	D0GB332JA002
R3972,73	ERJ3GEYJ103V	1/10W 10K	2	D0GB103JA002
R3975,76	ERJ3GEYJ101	1/10W 100	2	D0GB101JA002
R3977,78	ERJ3GEYJ103V	1/10W 10K	2	D0GB103JA002
R3979,80	ERJ6GEYJ471V	1/8W 470	2	
R3981,82	ERJ3GEYJ821V	1/10W 820	2	
R3983,84	ERJ3GEYJ104	1/10W 100K	2	
R3985	ERJ3RBD472V	1/16W 4.7K	1	
R3986	ERJ3RBD122V	1/16W 1.2K	1	
R3987	ERJ3GEYJ473V	1/10W 47K	1	D0GB473JA002
R3988,89	ERJ3GEYJ102V	1/10W 1K	2	
R3990,91	ERJ3GEYJ473V	1/10W 47K	2	D0GB473JA002
R3992,93	ERJ3GEYJ102V	1/10W 1K	2	
R3994	ERJ3GEYJ473V	1/10W 47K	1	D0GB473JA002
ZA3901-04	VMC1450	EARTH PLATE	4	
■	06	RFKBE85HGN/GCS/EE/EP		(DIGITAL P.C.B.)
C3401	ECJ1VB0J105K	6.3V 1U	1	
C3402	ECJ0EC1H220J	50V 22P	1	
C3403	ECJ0EB1A104K	10V 0.1U	1	
C3404,05	ECJ0EC1H220J	50V 22P	2	
C3406	ECJ0EB1A104K	10V 0.1U	1	
C3407,08	ECJ0EC1H100D	50V 10P	2	
C3410	ECJ0EB1C103K	16V 0.01U	1	
C3411	ECST0JX476R	6.3V 47U	1	
C3413	ECJ0EB1A104K	10V 0.1U	1	
C3417-19	ECJ1VB0J105K	6.3V 1U	3	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C3420	ECJ0EB1C103K	16V 0.01U	1	
C3421	ECJ0EB1A104K	10V 0.1U	1	
C3422	ECJ0EB1C103K	16V 0.01U	1	
C3423-28	ECJ0EB1A104K	10V 0.1U	6	
C3429,30	ECJ2FB0J106K	6.3V 10U	2	
C3431	ECJ0EB1A104K	10V 0.1U	1	
C3432	ECJ1VB0J105K	6.3V 1U	1	
C3433	ECJ0EB1A104K	10V 0.1U	1	
C3435,36	ECJ0EB1A104K	10V 0.1U	2	
C3440	EEEHB0J101P	6.3V 100P	1	
C3441	ECJ0EB1A104K	10V 0.1U	1	
C3502	ECJ0EB1C103K	16V 0.01U	1	
C4411	ECST1AY106R	10V 10U	1	
C4412	EEEHB0J470R	6.3V 47P	1	
C4413	EEEHB0J101P	6.3V 100P	1	
C4414,15	ECJ0EF1C104Z	16V 0.1U	2	
C4416	F2H0J331A016	6.3V 330U	1	
C4417	ECJ0EF1C104Z	16V 0.1U	1	
C4418	EEEHB0J101P	6.3V 100P	1	
C4421-26	ECJ0EB1E102K	25V 1000P	6	
C4427	EEEHB0J470R	6.3V 47P	1	
C4428	ECJ0EF1C104Z	16V 0.1U	1	
C4429	ECJ0EB1A104K	10V 0.1U	1	
C4430	ECST1AY106R	10V 10U	1	
C4431,32	ECJ0EF1C104Z	16V 0.1U	2	
C4433	EEEHB1C100R	16V 10P	1	
C4434	ECJ0EF1C104Z	16V 0.1U	1	
C6001	ECJ0EF1C104Z	16V 0.1U	1	
C6002	ECJ2FB0J106K	6.3V 10U	1	
C6003	ECJ0EB1C103K	16V 0.01U	1	
C9001,02	ECJ0EC1H470J	50V 47P	2	
C50001	ECJ1VB0J105K	6.3V 1U	1	
C50002	ECJ3YB0J226M	6.3V 22U	1	
C50004,05	ECJ0EB1A104K	10V 0.1U	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
D3401,02	MA3S132E0L	DIODE	2	
D4401	MA3Z142K0LG	DIODE	1	
FL3401,02	F1H0J4740004	FILTER	2	
FL3404	F1H0J4740004	FILTER	1	
FL3406,07	F1H0J4740004	FILTER	2	
FL3409-12	F1H0J4740004	FILTER	4	
FL3414-26	F1H0J4740004	FILTER	13	
FL3429	F1H0J4740004	FILTER	1	
FL3431	F1H0J4740004	FILTER	1	
FL3433-35	F1H0J4740004	FILTER	3	
FL3501,02	F1H0J4740004	FILTER	2	
FL3505-16	F1H0J4740004	FILTER	12	
FL4403-05	F1H0J4740004	FILTER	3	
FL6001-18	F1H0J4740004	FILTER	18	
FL6020-23	F1H0J4740004	FILTER	4	
FL6701-03	F1H0J4740004	FILTER	3	
FL50001-06	F1H0J4740004	FILTER	6	
FP3501	K1MN40A00022	CONNECTOR(40P)	1	
IC3401	AN13310B-VB	IC	1	
IC3402	C3ABMG000092	IC	1	
IC3404	MN85573R	IC	1	
IC3406	C1DB00001110	IC	1	
IC3408	C3ABPJ000052	IC	1	
IC3409	C0DBZGC00066	IC	1	
IC3501	MN88302R	IC	1	
IC3502	C3ABRG000036	IC	1	
IC4404	C0FBBK000035	IC	1	
IC4405	C0ABBB000105	IC	1	
IC4406	C0FBAK000008	IC	1	
IC4407	C0JBAA000257	IC	1	
IC4408	C0JBAD000107	IC	1	
IC4409	C0CBCBD00002	IC	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
IC6001	MN2DS0011-HR	IC	1	
IC6002	C0EBE0000130	IC	1	
IC6003	C3CBLD000091	IC	1	
IC6004	74LVC244APWL	IC	1	C0JBAZ001466
IC6005,06	C3ABRG000036	IC	2	
IC6701	C1ZBZ0002433	IC	1	
IC6703	RFKBE85HEE	DIGITAL P.C.B.	1	(EE)
IC6703	RFKBE85HGCS	DIGITAL P.C.B.	1	(GCS)
IC6703	RFKBE85HGN	DIGITAL P.C.B.	1	(GN)
IC50001,02	C3ABPG000067	IC	2	
LB3404,05	J0JHC0000032	COIL	2	
LB3408,09	J0JHC0000032	COIL	2	
LB4401-04	J0JGC0000020	COIL	4	
LB4405	J0JHC0000032	COIL	1	
LB6001-04	J0JHC0000032	COIL	4	
LB9001,02	J0JHC0000032	COIL	2	
LB9006,07	J0JCC0000103	COIL	2	
LB9008	J0JHC0000045	COIL	1	
LB9009	J0JHC0000046	COIL	1	
LB50001-05	J0JHC0000032	COIL	5	
P6002	K1KA06A00394	CONNECTOR(6P)	1	
P9001	K1KB88A00002	CONNECTOR(88P)	1	
Q6001,02	B1ABCF000114	TRANSISTOR	2	
Q6701-05	B1ABCF000114	TRANSISTOR	5	
Q50001-05	B1ADCF000081	TRANSISTOR	5	
QR3502,03	UN5213TX	TRANSISTOR	2	UNR521300L
R3405	ERJ2GEJ103	1/16W 10K	1	
R3407	ERJ2GE0R00X	1/16W 0	1	
R3409	ERJ2GE0R00X	1/16W 0	1	
R3410,11	ERJ2GEJ101	1/16W 100	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R3412	ERJ2GEJ220X	1/16W 22	1	ERJ2RMJ220X
R3414	ERJ2GEJ330X	1/16W 33	1	
R3416	ERJ2GEJ472X	1/16W 4.7K	1	ERJ2RMJ472X
R3417,18	ERJ2GEJ103	1/16W 10K	2	
R3419-23	ERJ2GEJ220X	1/16W 22	5	ERJ2RMJ220X
R3427	ERJ2GEJ220X	1/16W 22	1	ERJ2RMJ220X
R3430	ERJ2GEJ220X	1/16W 22	1	ERJ2RMJ220X
R3432-34	ERJ2GEJ220X	1/16W 22	3	ERJ2RMJ220X
R3436	ERJ2GEJ470	1/16W 47	1	
R3438	ERJ2GEJ220X	1/16W 22	1	ERJ2RMJ220X
R3440	ERJ2GEJ103	1/16W 10K	1	
R3442	ERJ2GEJ103	1/16W 10K	1	
R3443-45	ERJ2GE0R00X	1/16W 0	3	
R3447	ERJ2RHD682	1/16W 6.8K	1	
R3448	ERJ2GEJ562X	1/16W 5.6K	1	
R3449	ERJ2RHD682	1/16W 6.8K	1	
R3450	ERJ2GEJ104	1/16W 100K	1	
R3451	ERJ2GEJ220X	1/16W 22	1	ERJ2RMJ220X
R3452	ERJ2GE0R00X	1/16W 0	1	
R3453	ERJ2GEJ220X	1/16W 22	1	ERJ2RMJ220X
R3454	ERJ2GEJ390X	1/16W 39	1	ERJ2RMJ390X
R3455	ERJ2GEJ220X	1/16W 22	1	ERJ2RMJ220X
R3456	ERJ2GEJ470	1/16W 47	1	
R3457	ERJ2GE0R00X	1/16W 0	1	
R3458	ERJ2GEJ220X	1/16W 22	1	ERJ2RMJ220X
R3460-62	ERJ2GEJ470	1/16W 47	3	
R3463,64	ERJ2GE0R00X	1/16W 0	2	
R3472,73	ERJ2GEJ220X	1/16W 22	2	ERJ2RMJ220X
R3476	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R3501-03	ERJ2GEJ220X	1/16W 22	3	ERJ2RMJ220X
R3509	ERJ2GEJ330X	1/16W 33	1	
R3510,11	ERJ2GEJ103	1/16W 10K	2	
R3514	ERJ2GEJ105	1/16W 1M	1	
R3519-22	ERJ2GEJ330X	1/16W 33	4	
R3523	ERJ2GEJ103	1/16W 10K	1	






Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R3524	ERJ2GEJ330X	1/16W 33	1	
R3525	ERJ2GEJ103	1/16W 10K	1	
R3526-28	ERJ2GEJ220X	1/16W 22	3	ERJ2RMJ220X
R3530	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R3531	ERJ2GEJ820X	1/16W 82	1	
R3532	ERJ2GEJ472X	1/16W 4.7K	1	ERJ2RMJ472X
R3533	ERJ2GEJ101	1/16W 100	1	
R3535	ERJ2GEJ820X	1/16W 82	1	
R3537	ERJ2GEJ562X	1/16W 5.6K	1	
R3541,42	ERJ2GEJ103	1/16W 10K	2	
R3543	ERJ2GE0R00X	1/16W 0	1	
R3548	ERJ2GEJ330X	1/16W 33	1	
R4418-27	ERJ2GE0R00X	1/16W 0	10	
R4429	JAR0816P562D	1/16W 5.6K	1	D0HB562ZA002
R4430,31	JAR0816P103D	1/16W 10K	2	D0HB103ZA002
R4432	JAR0816P562D	1/16W 5.6K	1	D0HB562ZA002
R4434,35	ERJ3GEY0R00V	1/10W 0	2	
R4436	ERJ2GEJ221	1/16W 220	1	
R4437-39	ERJ2GE0R00X	1/16W 0	3	
R4450-52	ERJ2GE0R00X	1/16W 0	3	
R4453	ERJ2GEJ562X	1/16W 5.6K	1	
R4454-57	ERJ2GE0R00X	1/16W 0	4	
R6001	ERJ2GEJ333X	1/16W 33K	1	ERJ2RMJ333X
R6002	ERJ2GEJ332X	1/16W 3.3K	1	ERJ2RMJ332X
R6003	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R6004	ERJ2GEJ472X	1/16W 4.7K	1	ERJ2RMJ472X
R6005	ERJ2GEJ103	1/16W 10K	1	
R6006	ERJ2GEJ153	1/16W 15K	1	
R6007	ERJ2GEJ472X	1/16W 4.7K	1	ERJ2RMJ472X
R6008	ERJ2GEJ103	1/16W 10K	1	
R6009,10	ERJ2GEJ330X	1/16W 33	2	
R6011	ERJ2GEJ332X	1/16W 3.3K	1	ERJ2RMJ332X
R6013	ERJ2GEJ103	1/16W 10K	1	
R6014-17	ERJ2GEJ104	1/16W 100K	4	
R6018,19	ERJ2GEJ220X	1/16W 22	2	ERJ2RMJ220X

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R6020	ERJ2GE0R00X	1/16W 0	1	
R6021,22	ERJ2GEJ470	1/16W 47	2	
R6023	ERJ2GEJ332X	1/16W 3.3K	1	ERJ2RMJ332X
R6024	ERJ2GEJ103	1/16W 10K	1	
R6027	ERJ2GE0R00X	1/16W 0	1	
R6028	ERJ2GEJ470	1/16W 47	1	
R6029	ERJ2GEJ103	1/16W 10K	1	
R6031	ERJ2GEJ470	1/16W 47	1	
R6035	ERJ2GEJ470	1/16W 47	1	
R6036	ERJ2GEJ332X	1/16W 3.3K	1	ERJ2RMJ332X
R6037	ERJ2GEJ333X	1/16W 33K	1	ERJ2RMJ333X
R6039	ERJ2GEJ103	1/16W 10K	1	
R6040	ERJ2GEJ332X	1/16W 3.3K	1	ERJ2RMJ332X
R6701	ERJ2GEJ104	1/16W 100K	1	
R6703	ERJ2GEJ103	1/16W 10K	1	
R6706,07	ERJ2GEJ470	1/16W 47	2	
R6709,10	ERJ2GEJ332X	1/16W 3.3K	2	ERJ2RMJ332X
R6711,12	ERJ2GEJ470	1/16W 47	2	
R6713	ERJ2GEJ103	1/16W 10K	1	
R6714	ERJ2GEJ333X	1/16W 33K	1	ERJ2RMJ333X
R6715	ERJ2GEJ470	1/16W 47	1	
R6716,17	ERJ2GEJ333X	1/16W 33K	2	ERJ2RMJ333X
R6718	ERJ2GE0R00X	1/16W 0	1	
R6720-28	ERJ2GEJ470	1/16W 47	9	
R6729	ERJ2GEJ104	1/16W 100K	1	
R6730	ERJ2GEJ103	1/16W 10K	1	
R6731	ERJ2GEJ222X	1/16W 22K	1	ERJ2RMJ222X
R6733	ERJ2GEJ103	1/16W 10K	1	
R6735	ERJ2GEJ472X	1/16W 4.7K	1	ERJ2RMJ472X
R6737,38	ERJ2GEJ470	1/16W 47	2	
R6739	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R6750,51	ERJ2GEJ470	1/16W 47	2	
R6752	ERJ2GEJ101	1/16W 100	1	
R6753-56	ERJ2GEJ470	1/16W 47	4	
R50001	ERJ2GEJ390X	1/16W 39	1	ERJ2RMJ390X

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R50002	ERJ2GE0R00X	1/16W 0	1	
R50003	ERJ2GEJ390X	1/16W 39	1	ERJ2RMJ390X
R50004	ERJ2GE0R00X	1/16W 0	1	
R50005	ERJ2GEJ330X	1/16W 33	1	
R50006,07	ERJ2GEJ470	1/16W 47	2	
R50008	ERJ2GEJ100	1/16W 10	1	
R50009	ERJ2GEJ103	1/16W 10K	1	
R50010	ERJ2RHD242	1/16W 2.4K	1	
R50011	ERJ2RHD223X	1/16W 22K	1	
R50012,13	ERJ2GE0R00X	1/16W 0	2	
R50015	ERJ2RHD333	1/16W 33K	1	
R50016	ERJ2RHD152	1/16W 1.5K	1	
R50017	ERJ2RHD153	1/16W 15K	1	
R50018	ERJ3RBD151	1/16W 150	1	
R50019	ERJ2GEJ330X	1/16W 33	1	
R50020	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R50021	ERJ3RED820	1/16W 82	1	
R50022	ERJ2GEJ330X	1/16W 33	1	
R50023	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R50024	ERJ3RED820	1/16W 82	1	
R50025	ERJ2GEJ330X	1/16W 33	1	
R50026	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R50027	ERJ3RBD151	1/16W 150	1	
R50028	ERJ2GEJ330X	1/16W 33	1	
R50029	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R50030	ERJ3RED220	1/16W 22	1	
R50031	ERJ3RBD151	1/16W 150	1	
R50032	ERJ2GEJ330X	1/16W 33	1	
R50033	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R50034,35	ERJ3RED160V	1/16W 16	2	
R50036-38	ERJ2GEJ470	1/16W 47	3	
R50039	ERJ2GEJ820X	1/16W 82	1	
RX3401-17	D1H82204A024	RESISTOR-RESISTOR	17	
RX3421,22	D1H82204A024	RESISTOR-RESISTOR	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
RX3433-44	D1H82204A024	RESISTOR-RESISTOR	12	
RX3501-04	D1H82204A024	RESISTOR-RESISTOR	4	
RX3505-08	D1H83304A024	RESISTOR-RESISTOR	4	
RX3515-19	D1H83304A024	RESISTOR-RESISTOR	5	
RX3520-26	D1H82204A024	RESISTOR-RESISTOR	7	
RX3527-32	D1H81034A024	RESISTOR-RESISTOR	6	
RX3538-40	D1H84734A024	RESISTOR-RESISTOR	3	
RX6001	D1H81034A024	RESISTOR-RESISTOR	1	
RX6002-04	D1H84704A024	RESISTOR-RESISTOR	3	
RX6005,06	D1H83304A024	RESISTOR-RESISTOR	2	
RX6007	D1H84704A024	RESISTOR-RESISTOR	1	
RX6009-26	D1H83304A024	RESISTOR-RESISTOR	18	
RX6027-32	D1H84704A024	RESISTOR-RESISTOR	6	
RX6033,34	D1H83324A013	RESISTOR-RESISTOR	2	
RX6035,36	D1H83334A024	RESISTOR-RESISTOR	2	
RX6037	D1H81034A024	RESISTOR-RESISTOR	1	
RX6038	D1H83304A024	RESISTOR-RESISTOR	1	
RX6039-42	D1H84704A024	RESISTOR-RESISTOR	4	
RX6043	D1H81034A024	RESISTOR-RESISTOR	1	
RX6044	D1H83334A024	RESISTOR-RESISTOR	1	
RX6701,02	D1H81034A024	RESISTOR-RESISTOR	2	
RX6703-06	D1H84704A024	RESISTOR-RESISTOR	4	
RX6708	D1H84704A024	RESISTOR-RESISTOR	1	
RX6711-13	D1H83324A013	RESISTOR-RESISTOR	3	
RX6716	D1H84704A024	RESISTOR-RESISTOR	1	
RX6717-19	D1H83334A024	RESISTOR-RESISTOR	3	
RX6720-23	D1H83324A013	RESISTOR-RESISTOR	4	
RX6724	D1H84704A024	RESISTOR-RESISTOR	1	
RX6726-28	D1H84704A024	RESISTOR-RESISTOR	3	
RX6729,30	D1H81034A024	RESISTOR-RESISTOR	2	
RX6731-34	D1H84704A024	RESISTOR-RESISTOR	4	
RX6735	D1H82224A024	RESISTOR-RESISTOR	1	
RX6736	D1H81034A024	RESISTOR-RESISTOR	1	
RX6737	D1H84724A024	RESISTOR-RESISTOR	1	
RX6738	D1H83334A024	RESISTOR-RESISTOR	1	


Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
RX50001-16	D1H84704A024	RESISTOR-RESISTOR	16	
X3401	H0J270500069	CRYSTAL OSCILLATOR	1	
X3501	H2D330500001	CRYSTAL OSCILLATOR	1	
■	07	ETXMM507E4F		(POWER SUPPLY P.C.B.)
C001	ECKENA102ME	1000P	1	
C002	ECQU2A104ML	0.1U	1	
C003	ECQU2A334ML	0.33	1	
C006	ECKENA102ME	1000P	1	
C008	KH102M	1000P	1	
C009	KMM2W470JZ	450V 47	1	
C010	RR3DD331K	2KV 330P	1	
C011	ECKENA102ME	1000P	1	
C012	MBC471J5	50V 470P	1	
C013	KY1H220	50V 22	1	
C014	MBB224K2	25V 0.22	1	
C015	MBB224K5	25V 0.22	1	
C101	KBR221K2E	250V 220P	1	
C102	ECJ2XB1H102K	50V 1000P	1	ECJ2VB1H102K
C103	KBR221K2E	250V 220P	1	
C104	ECJ2XB1H102K	50V 1000P	1	ECJ2VB1H102K
C105	KY1E471	25V 470	1	
C106	KY1A222	10V 2200	1	
C107	MBC102J5	50V 1000P	1	
C109	MBB104K2	25V 0.1U	1	
C110	MBB683K5	55V 0.068	1	
C111	MBB105K1	16V 1U	1	
C112	KY1A471	10V 470U	1	
C113	MBB105K1	16V 1U	1	
C115	MBB224K5	25V 0.22	1	
C117	KY1E221	25V 220U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C118	KMG1H100	50V 10	1	
C119	ECA1AHG102	10V 1000U	1	
C120	KY1E681L	25V 680	1	
C122	MBB104K2	25V 0.1U	1	
C123	KY1C471	16V 470		
C124	KY1E221	25V 220U	1	
C125	ECA1AHG102	10V 1000U	1	
C127	ECJ2XB1H333K	50V 0.033U	1	
C128	KY1A471	10V 470U	1	
C129	MBB105K1	16V 1U	1	
C130	MBC102J5	50V 1000P	1	
C131	MBB105K1	16V 1U	1	
C141	MBB104K2	25V 0.1U	1	
C142	MBB105K1	16V 1U	1	
D001-04	GPP20J	DIODE	4	
D005	ST3D200	CLAMPER	1	
D006	AL01Z	DIODE	1	B0HAMM000077
D007	MA2J72800L	DIODE	1	MA2J728
D101	RK49	DIODE	1	B0JAPK000005
D102	FCQ20A6	DIODE	1	
D103	BRF1560	DIODE	1	
D104-07	MA165TA5	DIODE	4	MA2C16500E
D108	FCH05A10	DIODE	1	
D111-13	MA165TA5	DIODE	3	MA2C16500E
D114	GPP20J	DIODE	1	
D120	MA2J11100L	DIODE	1	
F001	19181-2A	FUSE	1	
F101	SBM40	FUSE	1	
F102	SBM32	FUSE	1	
F103	SBM25	FUSE	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
IC001	STRG6353	IC	1	
IC101	TL431AI	IC	1	
IC102	LM2904DR	IC	1	
IC103	SI3010KM	IC	1	
IC105	BD4746G	IC	1	
IC106	SI3120J	IC	1	
IP101	ICPN10	IC PROTECTOR	1	
L002	ELF15N005A	COIL	1	
L004	ELESN150KA	COIL	1	
L005	EXCELSA35	COIL	1	
L010,11	EXCELSA35	COIL	2	
L101	EXCELD35	COIL	1	
L102	LHLZ1R5M	COIL	1	
L103	EXCELD35	COIL	1	
L104	LHLZ6R8M	COIL	1	
L105	EXCELSA35	COIL	1	
L106	LH8TB100K	COIL	1	
L107	EXCELSA35	COIL	1	
L108	EXCELD35	COIL	1	
L109	LHLZ4R7M	COIL	1	
P001	K2AA2H000007	AC INLET	1	
PC001	PS2571L1	PHOTO COUPLER	1	
PS101	B4B-EH-A	CONNECTOR(4P)	1	
PS102	TWGP23XA1	CONNECTOR(23P)	1	
Q101	2SD602A-R	TRANSISTOR	1	2SD0602AR
Q102	2SB710AQRSTX	TRANSISTOR	1	2SB0710AWL
Q103	2SB0709ARL	TRANSISTOR	1	
Q104	2SD601A-R	TRANSISTOR	1	2SD0601AR

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
Q105	2SK3366	TRANSISTOR	1	
Q106,07	2SD601A-R	TRANSISTOR	2	2SD0601AR
Q110	2SB710AQRSTX	TRANSISTOR	1	2SB0710AWL
Q111	2SD601A-R	TRANSISTOR	1	2SD0601AR
Q113	2SK3366	TRANSISTOR	1	
Q114	2SB710AQRSTX	TRANSISTOR	1	2SB0710AWL
Q115,16	2SD601A-R	TRANSISTOR	2	2SD0601AR
Q117	2SB0709ARL	TRANSISTOR	1	
Q118	2SD602A-R	TRANSISTOR	1	2SD0602AR
Q119	2SB710AQRSTX	TRANSISTOR	1	2SB0710AWL
R001	ERDS1FJ105	0.5W 1M	1	
R002	CR10J681	0.1W 680	1	
R003	ERX1SZGR47	1W 0.47	1	
R005	ERDS2FJ224	1/4W 220K	1	
R006	ER0S2TKF2373	0.25W 237K	1	
R007	CR10F1272	0.1W 12.7K	1	
R008	CR10J562	0.1W 5.6K	1	
R009	ERDS2FJ224	1/4W 220K	1	
R010	ER0S2TKF2373	0.25W 237K	1	
R101	CR10J472	0.1W 4.7K	1	
R102,03	CR10J100	0.1W 10	2	
R104	CR10J471	0.1W 470	1	
R105	CR10J472	0.1W 4.7K	1	
R106	ERJ6GEYJ101V	1/8W 100	1	
R107	CR10J224	0.1W 220K	1	
R108	CR10J472	0.1W 4.7K	1	
R109	CR10J222	0.1W 2.2K	1	
R110	CR10J103	0.1W 10K	1	
R111	CR10J752	0.1W 7.5K	1	
R112	CR10J102	0.1W 1K	1	
R113	CR10J471	0.1W 470	1	
R114	ERJ6GEYJ101V	1/8W 100	1	
R115	CR10J332	0.1W 3.3K	1	
R116	CR10J102	0.1W 1K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R117	ERJ6GEYJ101V	1/8W 100	1	
R120	CR10F2210	0.1W 221	1	
R121	CR10F1001	0.1W 1K	1	
R122	CR10J183	0.1W 18K	1	
R124	CR10F1470	0.1W 147	1	
R125	CR10J103	0.1W 10K	1	
R126	CR10F1002	0.1W 10K	1	
R127	CR10F3321	0.1W 3.32K	1	
R128	CR10F1211	0.1W 1.21K	1	
R130	CR10J822	0.1W 8.2K	1	
R131	CR10J103	0.1W 10K	1	
R132	CR10J472	0.1W 4.7K	1	
R136,37	CR10J152	0.1W 1.5K	2	
R139	CR10J123	0.1W 12K	1	
R143	ERDS2FJ822	1/4W 8.2K	1	
R144	CR10J222	0.1W 2.2K	1	
R145	CR10F6980	0.1W 698	1	
R153	CR10F1002	0.1W 10K	1	
R154	CR10F3321	0.1W 3.32K	1	
R157	CR10F2210	0.1W 221	1	
R158	CR10J682	0.1W 6.8K	1	
R159	CR10J103	0.1W 10K	1	
R160	CR10J332	0.1W 3.3K	1	
R163	CR10J183	0.1W 18K	1	
R164	CR10J222	0.1W 2.2K	1	
R165,66	CR10J103	0.1W 10K	2	
R167,68	CR10J152	0.1W 1.5K	2	
R169	CR10J102	0.1W 1K	1	
R170	CR10J752	0.1W 7.5K	1	
R171	CR10J472	0.1W 4.7K	1	
R172	ERJ6GEYJ101V	1/8W 100	1	
R173	CR10J224	0.1W 220K	1	
R174	CR10J471	0.1W 470	1	
R175	CR10J472	0.1W 4.7K	1	
R176	CR10F1002	0.1W 10K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R177	CR10F2432	0.1W 24.3K	1	
R178	CR10J472	0.1W 4.7K	1	
R179	CR10J223	0.1W 22K	1	
R195	CR10J103	0.1W 10K	1	
T001	ETB28BF1U6A	TRANSFORMER	1	
VR101	ER0S2TKF1580	0.25W 158	1	
Z001	ERZVGAD471	VARISTOR	1	
ZD002	MA4068N	DIODE	1	
ZD004	MA8051	DIODE	1	
ZD101	MA4039M	DIODE	1	MAZ40390M
ZD102	MAZ8051	DIODE	1	
ZD103	MA8051	DIODE	1	
ZD104	MA8082	DIODE	1	
ZD105	MAZ8051	DIODE	1	
ZD106	MA8051	DIODE	1	
ZD107	RD6.2ESB	DIODE	1	
	08	REP3713B		(FRONT(R) P.C.B.)
C7801	ECJ1VF1A105Z	10V 1U	1	
D7801	SLR-325MG	LED	1	B3ABA0000109
D7804,05	SLR-325MG	LED	2	B3ABA0000109
D7806	B3ACA0000252	LED	1	
IR7801	B3RAD0000071	REMOTE SENSOR	1	
K7801,02	ERJ3GEY0R00V	1/10W 0	2	
P7801	K1KA12B00136	CONNECTOR(12P)	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
QR7801	UN2214	TRANSISTOR	1	UNR2214
QR7804-06	UN2214	TRANSISTOR	3	UNR2214
R7801	ERDS2FJ330	1/4W 33	1	
R7802	ERJ3GEYJ221V	1/10W 220	1	
R7805,06	ERJ3GEYJ221V	1/10W 220	2	
R7807	ERJ3GEYJ391V	1/10W 390	1	
R7809	ERJ3RBD272	1/16W 2.7K	1	
R7817	ERJ3RBD272	1/16W 2.7K	1	
R7818	ERJ3RBD222V	1/16W 2.2K	1	
R7819	ERA3YED332	1/16W 3.3K	1	
R7825	ERJ3RBD272	1/16W 2.7K	1	
R7826	ERJ3RBD222V	1/16W 2.2K	1	
R7827	ERA3YED332	1/16W 3.3K	1	
R7828	ERJ3RBD562V	1/16W 5.6K	1	
S7801	EVQ11G07K	SWITCH(OPEN/CLOSE)	1	
S7802	EVQ11G07K	SWITCH(SKIP-F)	1	
S7809	EVQ11G07K	SWITCH(CH-DOWN)	1	
S7811	EVQ11G07K	SWITCH(REC)	1	
S7812	EVQ11G07K	SWITCH(STOP)	1	
S7813	EVQ11G07K	SWITCH(SKIP-R)	1	
S7819	EVQ11G07K	SWITCH(CH-UP)	1	
S7820	EVQ11G07K	SWITCH(TIME-SLIP)	1	
S7821	EVQ11G07K	SWITCH(PLAY)	1	
S7822	EVQ11G07K	SWITCH(DRIVE SELECT)	1	

21. Schematic Diagram for printing with A4



¹ © 2004 Matsushita Electric Industrial CO., Ltd. All rights reserved. Unauthorized copying and distribution is a violation of law.